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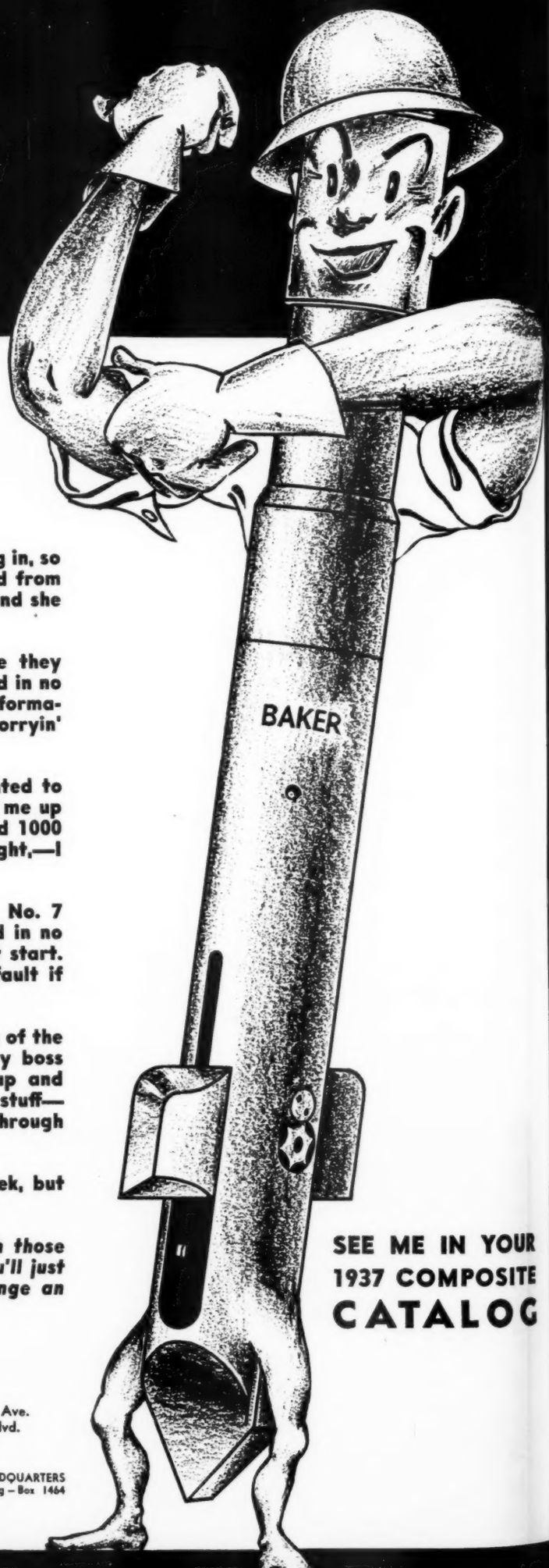
I ASKED FOR WORK AN' Boy DID I GET IT!



I TOLD you fellows I was rarin' to work and if you don't think I've been busy, just take a look at my last week's work sheet.

MONDAY—that No. 1 Well was just about ready to bring in, so the boss sent me down to scrape away the plastered mud from the sand so she'd come in quick and easy. I did my stuff and she came in for 1700 barrels.

TUESDAY—things were in an uproar—an' all because they couldn't get a water shut-off on No. 4. So down I went and in no time at all I'd reamed out all the old cement and enough formation so's the boys could go ahead and recement without worryin' about whether she'd hold this time.

WEDNESDAY—I really earned my pay. The boss wanted to set a 6⅝" liner through an 8⅝" water string. They fixed me up with 9¼" blades, and in less than sixteen hours I reamed 1000 feet of sandy blue shale from 7⅝" to 9¼". Yes, you're right,—I didn't loaf a bit.

THURSDAY—Was the Supe wild when they surveyed No. 7 and found 'er 4 degrees off. They put me on the job and in no time at all I'd cut a wide, square shoulder for a new bit start. Did that hole get back to vertical? Well, it wasn't my fault if it didn't.

FRIDAY—was the day for setting 6⅝" in No. 9—the jinx of the field. She'd been a mighty expensive hole so far and my boss wanted to be sure of getting a good body of cement up and around the shoe and casing. I went down and did my stuff—wall-scraping about 40 foot of hole and when they got through cementing and tested, she was as dry as a bone.

SATURDAY—no work Saturday—I'm on a five-day-week, but in case of emergency, I'm always on call.

I'd sure like to "scrape" up an acquaintance with those who haven't gotten around to tryin' me out yet and if you'll just drop a line to my boss at his nearest office, he'll arrange an introduction. I'll be seein' you!

SEE ME IN YOUR 1937 COMPOSITE CATALOG

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BAKER ROTARY WALL SCRAPER

Output Over Prior Top by 70,690 Bbls.

RECENT gains in national crude oil production were dwarfed last week when output shot up, passing the previous week's peak by 70,690 barrels daily. Substantial gains in Texas and Oklahoma, with a smaller rise in California, accounted for the total increase with minor declines reported in Louisiana and Kansas.

Just how desirable this record production of the industry's raw material is was a moot question within the industry. A committee representing the Independent Petroleum Association of America last week found that current production, including refinery runs to stills, was at too high levels, pointing to the fact that crude stocks had mounted weekly, starting late in January. The opinion was expressed that seasonal additions to gasoline inventories were excessive. The president of the association brought the situation closer home in a statement blaming the heavy crude production for failure of price schedules to show additional advances. Officials declared more consideration should be given the Bureau of Mines recommendations in establishing state allowables.

Those who favor curtailed production operations were also able to point to the first government report in 1937 covering supply and demand for crude and its products. This report shows that despite favorable weather conditions, the gain in motor fuel demand in January over the same month in 1936 was only 4.5 per cent, with kerosene demand running behind last year. The crude supply and refinery runs, in contrast, increased 10 per cent, being motivated apparently by increased fuel oil needs.

Production 3,379,549

Increase 70,690

On the optimistic side observers were able to stress an improvement in the shipments of gasoline, with continued tightness in the crude market. Mid-Continent buying included large company purchases. In this connection it was suggested by some that fear of labor difficulties due to unionization plans may be a factor in major company gasoline buying and the competition among crude buyers to take on new connections in the fields. The only general price weakness reported during the week was in the furnace-oil distillates, with several sellers shading quotations on material for prompt delivery.

The completion of large wells in old producing areas was outstanding in field reports during the week. Some of these large wells are due to the greater care in drilling and completing wells.

The week's developments point further to a 12-mile southeast extension to the present producing area of Rodessa field in Texas. A deep output test in Talco area was dry in the Trinity sand.

Daily Average Production for Week

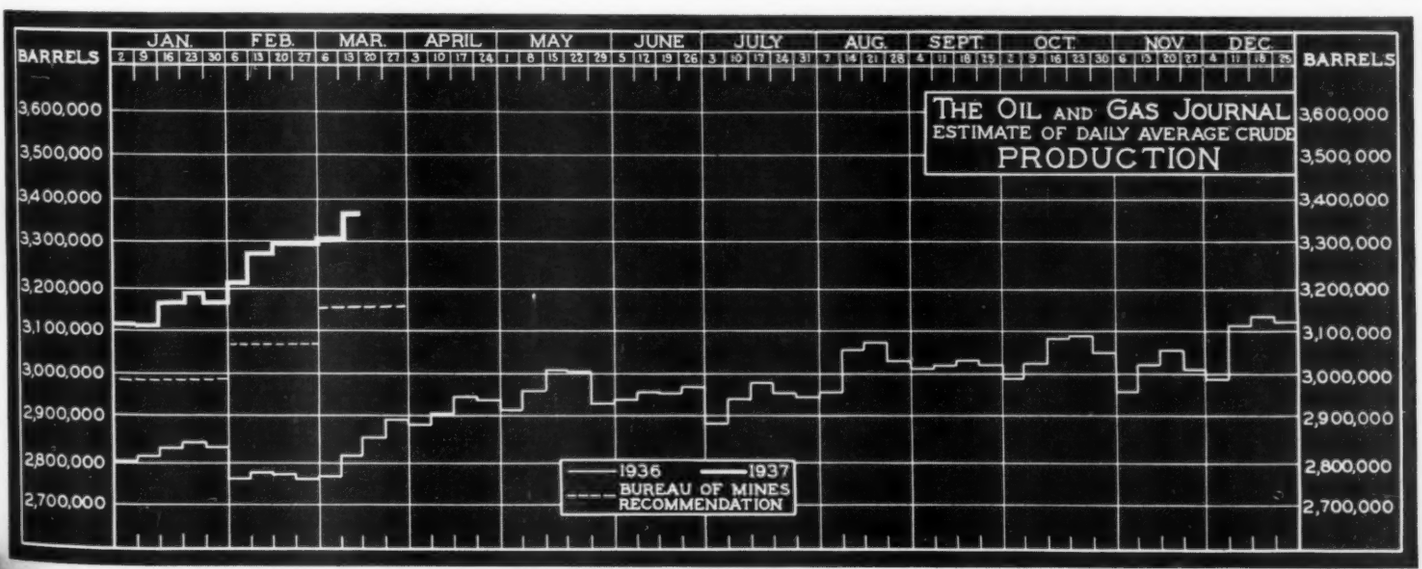
	Mar. 13, 1937	Bur.Mines Mar. est.	Mar.State allowables	Mar. 6, 1937
Oklahoma City	141,750	.....	.....	131,875
Seminole-St. Louis	89,000	.....	.....	88,175
Remainder of State	385,175	.....	.....	358,075
Total Oklahoma	615,925	590,700	620,460	578,125
East Texas	458,700	.....	.....	460,398
West Texas	208,389	.....	.....	197,746
North Central Texas	99,296	.....	.....	99,089
Texas Panhandle	73,489	.....	.....	68,697
East Central Texas	119,550	.....	.....	111,150
Gulf Coast—Texas	327,197	.....	.....	316,000
Southwest Texas	107,048	.....	.....	106,700
Total Texas	1,393,669	1,256,600	1,398,514	1,359,780
North Louisiana	67,580	.....	.....	71,065
Gulf Coast—Louisiana	173,000	.....	.....	175,200
Total Louisiana	240,580	240,000	236,000	246,265
Santa Fe Springs	45,100	.....	.....	44,250
Long Beach	61,500	.....	.....	61,750
Kettleman Hills	76,500	.....	.....	75,700
Remainder of State	409,500	.....	.....	402,800
Total California	592,600	570,900	*551,100	584,500
Kansas	183,275	178,000	186,968	187,350
Arkansas	26,650	28,500	.....	27,162
Eastern Fields	116,000	114,700	.....	116,800
Michigan	35,170	30,300	.....	34,027
Southeastern New Mexico	102,130	87,150	102,155	102,120
Rocky Mountain area	73,550	62,150	.....	72,730
Total United States	3,379,549	3,159,000	.....	3,308,859

*Recommendation of Central Committee of California Oil Producers.

Crude Oil Stocks in United States

(BUREAU OF MINES ESTIMATES)

Week ending February 27, 1937	288,121,000
Week ending February 20, 1937	287,574,000
Week ending February 29, 1936	310,812,000



Through Texas woods

Gain in Gas Res

Need for Addi

With the great cities of the Middle West in the market for more natural gas, especially for industrial purposes, and with the big annual drain on the gas fields of Texas, Kansas and Louisiana which are supplying cities hundreds of miles distant as well as cities and towns in the states of origin, it is important as well as interesting to note what the oil and gas industries are doing to provide new supplies.

The gas fields of Louisiana, Texas and Kansas are supplying gas to far distant cities like Detroit, Birmingham and Minneapolis. The drain on the fields is great, but the demand is growing, especially in the middle western cities where natural gas for fuel has made a permanent place for itself.

Large manufacturers, having been given the opportunity to use gas instead of other fuels, are demanding more of it, and the demand must be met.

The petroleum and natural gas industries have not been idle. From New York to California a never ceasing search for new supplies has been carried on, and while no great gas structures like those in which gas from the Texas Panhandle and the Monroe field in Louisiana originate, have been discovered in the past year, the states of Oklahoma, Kansas, Texas, California, Michigan, New York, Pennsylvania and West Virginia have combined to contribute a tremendous new potential gas supply.

The largest gas field in the United States is that in the Texas Panhandle, from which there has been a tremendous withdrawal for several years. There is a growing feeling that the structure extends northward through the Oklahoma Panhandle and into southwestern Kansas. The Hugoton field and the big Texas Panhandle field yield gas from the same geological horizon, which strengthens the belief that large gas reserves, still untapped, exist between the two big fields.

The Hugoton field, which centers in Stevens County, Kansas, and extends southward into Texas County, Oklahoma, reaches westward into Morton County, and northward into Grant County, Kansas, has barely been scratched. A big campaign of leasing has been going on for some time in the general Hugoton district. The largest single leasing transaction reported was the acquisition of the Anchor D ranch in Texas County, Oklahoma, by the Empire Gas & Fuel Co. It is a property comprising 170,000 acres.

Hagy, Harrington & Marsh, Inc., large producers in the Texas Panhandle gas field, have blocked up 165,000 acres in Texas County, Oklahoma, and in Stevens and Morton counties in Kansas. This firm supplies a large volume of gas to the General Motors Corp., from its Texas properties, and it is said that the purchase of additional reserves in Oklahoma and Kansas is being done for General Motors. The Texas Co. and the Phillips Petroleum Co. are also large lease owners in the Hugoton field.

New discovery

Hugoton is not being drawn upon heavily as yet. From about 150 wells it is producing something over 50,000,000 feet of gas per day, the buyers being the Argus Gas Co., which supplies Kansas towns; the Cimmaron Utilities Co., which retails its gas in the Oklahoma Panhandle; the Colorado Gas & Utilities Co., which supplies eastern Colorado; the Northern Natural Gas Co., which supplies central Kansas cities, and cities in Nebraska, South Dakota and Minnesota, and to the Panhandle Eastern Pipe Line Co. with its eastern terminus in Detroit, Mich. The Northern Natural Gas line and the Panhandle Eastern line originate in the Texas Panhandle drawing the bulk of their gas supplies from that district.

Seward, Grant, Haskell and Finney counties in western Kansas, are known gas fields, but they have had little, if any market, and the drilling of wells has been minimized on that account. The production from the same horizon productive in the Hugoton field.

The prolific Otis gas area in Rush County was extended in the past year. Most of the gas produced in that field comes from the Pennsylvania basal conglomerate around 3,500 feet, but a 13,000,000-foot production was found in the Wabaunsee, in the 2,300-foot horizon, which was killed and the well deepened. Big gassers have been completed in the oil fields in central Kansas, a 47,000,000-foot completion having been recorded last week in Barton County, showing what may be expected from that end of the state.

OKLAHOMA

Oklahoma has 18 distinct gas-producing sands from 175 feet to 6,500 feet deep, and has one of the largest gas reserves in the country. The strictly dry gas fields of recent origin are the Chickasha gas field in Grady County, the Cement area in Caddo County and the big Quinton gas field in Pittsburg and Haskell counties.

One Caddo County field produces gas from five sands and has shown wells of 25,000,000 to 75,000,000-foot capacity. Four wells ranging in depth from 3,800 to 6,200 feet have been drilled in that field. In the East Cement area wells of 50,000,000 to 60,000,000 feet initial production have been completed. This great field has seen little development thus far, but it stands ready to be drawn upon when the need comes. An 83,000,000-foot well was completed in section 26-6n-10w, Caddo County, in the past week, at a total depth of 5,364 feet.

The Quinton field lies in Townships 7n-20e, 8n-20e, 7n-19e, 8n-19e, 7n-18e and 7n-17e, Pittsburg and Haskell counties, and over 30,000 acres of it have been proven. The wells in this field have ranged from 1,000,000 to 20,000,000 feet initially.

The Red Oak field in Latimer County, consisting of 9,000 proven acres in Townships 6n-21e, 6n-22e, 6n-23e, 7n-22e and 7n-23e, is a prolific field. A 25,000,000-foot gasser was completed in section 15-5n-18e, Latimer County, at 2,500 feet, opening another good gas reserve.

One of the greatest of the country's gas reserves is in the Fitts field in Pontotoc County where wells in sands above the oil-bearing forma-

Natural Gas at Threshold of New Expansion

The natural gas industry definitely left the depression period behind in 1936 when marketed production totaled 2,200,000,000,000 cubic feet, a gain of 50 per cent over 1933.

It is now practically assured 1937 will see additional gains in all the principal consumer uses.

Most of the consumption is still in the states which produce the gas, leaving a vast area in which possible industrial and domestic markets have only been touched.

The gas industry has known reserves which assure adequate supplies for many years at a much larger rate of production. These supplies are constantly being supplemented by new discoveries, including those made by operators drilling for oil. There is a pressing need for more outlets.

The accompanying article discusses these developments, with detailed summaries by areas.

erves Points to tional Outlets

In rocky country

tion have produced from 30,000,000 to 60,000,000 feet open flow, but which were "killed" to drill deeper to the oil sands. These shallower sands lie there awaiting the time when they will be needed to supplement Oklahoma's present producing gas areas. In addition to this big dry gas reserve the field is producing and marketing an immense volume of gas from oil wells.

The Moore field in Cleveland County has shown gas production up to 100,000,000 feet per day in individual wells, and the Edmond field in Oklahoma County is rich in gas, one well having produced 200,000,000 feet open flow. The Oklahoma City field has a potential production of 1,047,755,000 feet per day from 130 wells producing from Hoover, Tonkawa, Layton, Detrital, Oolitic, Prue, Oswego, Cleveland and Simpson formations, and a daily allowable production of 262,253,000 feet. A test in the Billings area in Noble County drilled in 1936 started at 100,000,000 feet open flow, but was shut in. It produces from Wilcox sand. The Meaders gas field in sections 26 and 35-8-8, Hughes County, has six gas wells that initialed 15,000,000 to 30,000,000 feet production per well and the gas area in section 13-9-9, Okfuskee County, has shown wells of 40,000,000 feet initial production.

NORTH LOUISIANA-EAST TEXAS

The North Louisiana-East Texas border territory has discovered many important gas-producing structures in the last six months in a very active search for oil. Additional drilling and production from the majority of these new discoveries is now seriously hampered for want of a market outlet for the gas production. All of these structures bear a high-gravity distillate with the gas, but without a market for the gas, the distillate cannot be produced.

The two public service companies having gathering and transmission systems in the territory have an abundance of gas at the present time, and have extensive holdings in proven gas-producing territories.

Enumeration of the more recent and important gas discoveries of this territory follows:

In the Lake Bistineau shallow gas-producing area, in Bienville Parish, DeSoto Oil & Gas Co. opened a deep pay level in Basal Lower Glen Rose in section 15-16-10, gauging 20,000,000 feet of saturated gas on January 1, 1937. Gas and heavy dark distillate is now being produced. There is no ready market for the gas.

Seaboard Oil Co. opened a new deep gas field in the Bearcreek area in Bienville Parish this year, by drilling deeper in section 3-16-6, into a Travis Peak gas sand topped at 7,460 feet. Potential tests indicated a well good for 70,000,000 feet through three-eighths inch top and bottom choke. The hole is being plugged back for testing other attractive showings before completing.

During recent months a new producing level has been discovered in the old Sligo gas field in Bossier Parish, the Pettitt sand, which United Gas Public Service Co. found productive of oil on the southwestern flank, in section 26-17-12, and Producers Oil & Gas Co. found productive of gas only on the northeastern flank, gauging 12,300,000 feet from sand at 5,102-99 feet. Both United Gas Public Service Co. and Arkansas-Louisiana Gas Co. are taking gas from the Sligo field, the latter having recently completed an absorption gasoline plant there.

First production from the Travis Peak was found by Lide, Greer and Marr in section 10-17-14, Lincoln Parish, at 6,576 feet through the completion of a 67,634,000-foot wet gasser, which was about one-half mile north of the same firm's No. 1 Fowler completed as a gas-distillate discovery in the Lower Glen Rose, total depth 5,300 feet. Arkansas-Louisiana Gas Co. owns gas rights under the extensive block upon which these wells are located, and recently completed a line to that area from its Monroe-Shreveport main.

The highly regarded Sibley-Dubberly area in Webster Parish was discovered near the midyear of 1936, by J. P. Evans in section 35-18-9, which gauged about 80,000,000 feet of wet gas, total depth 5,590 feet in Lower Glen Rose. Two offsets were drilled soon thereafter, both being completed as large gas-distillate producers.

Standard Oil Co. of Louisiana drilled in section 2-17-9, about 1 mile south of the Sibley discovery and found the same prolific saturation in the Lower Glen Rose, indicating a very wide structure at this point. This well is now in the process of completion at the 5,600-foot level.

Discovery of four distinctly different gas-producing horizons in the formerly shallow Cotton Valley field in Webster Parish was made by Ohio Oil Co. recently. Its No. 6 Holloway, section 23-21-10, was completed as an oil producer, gauging about 60 bbls. per hour with 5,000,000 feet of gas. This well was originally drilled to 8,556 feet and indicated three other producing levels which were later proven by additional drilling. A prolific gas and distillate horizon is found here at about 8,120-45 feet. The Bodcaw sand is next found, occurring at about 8,250 feet, and the fourth sand at around 8,525 feet both carrying heavy gas and distillate saturation.

EAST TEXAS (BORDER COUNTIES)

About 6 miles northeast of Carthage, Tex., A. C. Glassell and others opened a gas-distillate pool in their No. 1 Frost, Mary Potts Survey, Panola County, from the Lower Glen Rose, 5,600 feet, testing about 50,000,000 feet initially.

H. A. Stebbinger and others No. 1 Pickering Lumber Co., C. E. Henry Survey, Shelby County, Texas, was completed recently as a gasser, spraying some oil. Estimated volume was 30,000,000 feet daily. It opened the Lower Glen Rose producing horizon at the 5,025-foot level.

GULF COAST GAS RESERVES

The gradual expansion of deep drilling along the Gulf Coast district that followed the discovery of the first Marginulina production in 1928, has built up a large supply of natural gas reserves, estimated to be over 6,000,000,000,000 feet. This figure is estimated from 27 fields, the majority located within a radius of 50 miles of Houston.

The importance of the Houston district as a

Rough going on California gas line

large gas reserve began with the discovery of the Pledger field in Brazoria County, discovered in 1932. This is the largest known reserve in the district, having an estimated potential of over 2,000,000,000,000 feet, based on approximately 6,500 productive areas. It has been developed by Humble Oil & Refining Co. and Danciger Oil & Refining Co., which have completed 10 wells. Danciger Oil & Refining Co. has one gasoline plant in operation, while Humble Oil & Refining Co. is selling gas through its own gas system to several sulfur companies operating in that vicinity.

The exploration of these deeply seated structures gained momentum during 1933 and during the past three years 2,000,000,000,000 feet of gas reserves have been added by the discovery of some 16 fields, the majority discovered within the past 18 months. Recent discoveries include Amelia and Labelle in Jefferson County; Cotton Lake and Seabreeze, Chambers County; Silsbee, Hardin County; Fairbanks, Harris County; Danbury and Sandy Point, Brazoria County, and Hitchcock in Galveston County.

All the above fields are producing oil or distillate and have indicated a large gas flow by high surface pressures. On the outskirts of the Beaumont city limits northern Jefferson County, Humble Oil & Refining Co. and Glenn H. McCarthy opened the Amelia and West Beaumont fields in 1936. It has been estimated that the sand thickness of these two fields is 80 feet, and to date approximately 1,000 acres have been proven productive. Due south and centering in the William Burton Survey, Sun Oil Co. opened the Labelle field with the completion of No. 2 Broussard from a depth of 8,216 feet. The average thickness of the sand was 10 feet and it has been estimated that 300 areas has been proven by the one well.

Within recent weeks, development in the south Cotton Lake area, Chambers County, have indicated a large wet gas area, with the completion of two wells by the Salt Dome Oil Corp. Including this area and Cotton Lake field proper, the area producing from the Marginulina and Frio sands, extends over approximately 1,500 acres and the pay is about 10 feet in thickness.

In the central part of the county, Sun Oil Co. opened distillate production in the Seabreeze field by the completion of two wells. It has been estimated that the gas sand thickness is 20 feet and that 500 acres have been proven productive. The gas is being withdrawn at the rate of about 600,000 feet daily.

In the northeast part of Hardin County and centering in the G. W. Brooks Survey, Republic Production Co. and Houston Oil Co. opened the Silsbee field in 1936 as an oil field from the Cockfield sand. Production is obtained from the upper and lower sections of the formation, and it is reported that the average thickness of the gas cap is 8 feet, with 300 proven productive areas. The field is situated on a block of about 40,000 acres.

On the northeast outskirts of the Houston city limits centering in the Reels and Trobough Survey, Stanolind Oil & Gas Co. opened the Clinton or Green Bayou field in 1936 with the completion of No. 1 Candelari, which recorded a working pressure as high as 4,000 pounds. The well is producing below 8,000 feet and based on the one well, it is assumed that 200 acres has been proven. To the northwest and 15 miles from Houston, Stanolind Oil & Gas Co. and Amerada Petroleum Corp. opened the Fairbanks field which to date has approximately 200 proven acres and an estimated gas sand thickness of 10 feet. Around the flank of the old Danbury dome in Brazoria County, Humble Oil & Refining Co. opened a potential wet gas reserve with No. 1 Moller from the Marginulina sand. While flowing 24 bbls. of distillate per day, the well was estimated to be making 2,818,000 feet of gas. The gas sand thickness is said to be 20 feet. The production has been shut in. Northwest and about 30 miles southwest of Houston, the Sandy Point field was opened by C. B. Bunte and others several weeks ago, with the completion of No. 1 Fite. Production is from the Frio and the gas cap is about 20 feet in thickness, with 100 proven acres. Stanolind Oil & Gas Co. is the principal acreage holder.

The balance of these reserves are composed of the Dickinson and Anahuac fields in Galveston and Chambers counties which are the second and third largest reserves in the district. The sand thickness at Dickinson averages 90 feet with 4,000 proven acres while at Anahuac, 5,000 acres have been proven with an average gas sand thickness of 80 feet. Three wells have been completed in the latter field to supply gas to Humble Oil & Refining Co.'s gas line which ties into its main 10-inch line south of Devers.

Along the lower Gulf Coast, Barnsdall Oil Co. has apparently uncovered a large reserve for Nueces County by the recent showing of its wildcat at the Rockport Prospect in Nueces County. The well is on a large block and blew out from a depth below 8,000 feet. The only other important reserve was the opening of the Heyser field in Calhoun County by Humble Oil & Refining Co. which to date has two producing sands that have recorded extremely high surface pressures. It has been estimated that the producing limits will cover 3,200 acres which is jointly controlled by Humble Oil & Refining Co., Plymouth Oil Co. and Portilla Drilling Co.

On the Louisiana Gulf Coast, the Big Lake field in Cameron Parish and the South Jennings field in Jefferson Davis Parish are the only important reserves opened during the past two years. The Big Lake field is situated due south of Lake Charles and is controlled jointly by the Union Sulphur Co. and the Magnolia Petroleum Co. The South Jennings field is about 8 miles south of the town of Jennings in eastern Jefferson Davis Parish and was discovered by Stanolind Oil & Gas Co. It is producing from a depth of 8,648 feet and on a potential test flowed 5 bbls. of distillate and 4,000,000 feet of gas through a three-sixteenths inch choke, with tubing pressure 3,300 pounds.

NORTHERN TEXAS

The Texas Panhandle and the North Central and West Texas areas have not had many gas discoveries in the past year.

In Hansford County, in the Panhandle, Hobbs Oil Co. opened a gas pool in section 290, Block 2, G.H.&H. Survey, at a total depth of 2,864 feet. First gas was found in Dolomite at 2,690 feet. The well was shot with 380 quarts of nitroglycerin at 2,675-2,840 feet and produced 6,000,000 feet of gas initially.

In Denton County, North Texas, Bolivar Drilling Co. made a gas discovery in No. 1 Knox, N. Howard Survey. It was good for 1,250,000 feet per day at a total depth of 1,951 feet.

A large discovery gas well was developed in Young County by Eppenauer Drilling Co. 3 miles east of Graham in the T.&N.O.R.R. Survey No. 1. It was good for 40,000,000 feet per day at a total depth of 4,243 feet. The well also produced 253 bbls. of 63 gravity distillate in 24 hours.

Seaboard Oil Corp. found gas in Hamilton County in a test in the B.B.B.&C. Survey, 12 miles northwest of the town of Hamilton at a total depth of 2,565 feet. It started at 10,000,000 feet per day.

ROCKY MOUNTAIN STATES

The upper Rocky Mountain states, including Colorado, Wyoming, Montana and Utah, consume approximately 53,000,000,000 feet of gas per year and produce about 41,000,000,000 feet annually. The excess consumption comes principally from the Amarillo field in Texas and partly from southwestern Kansas.

The only major gas discovery in the Rocky Mountain area in the past year was on the Allen Lake Structure in Carbon County, Wyoming, in the Medicine Bow Oil Co. No. 1 Hintze-Government, C NE SE section 18-22n-78w. It was completed last December for 25,000,000 feet a day in the Upper Sundance at 2,033-58 feet. While only one well has been drilled on what now appears to be the top of a large structure, it indicates the presence of large reserves.

Of 34 wells drilled in as gassers in Montana, all, with one exception, are in producing gas fields and resulted only from normal development. The exception was a 10,000,000-foot gasser drilled on the Mosser dome in Yellowstone County by R. C. Tarrant in section 8-2s-25e, but this is apparently a small structure that will add very little to the major reserves.

CALIFORNIA GAS DISCOVERIES

The 10 dry gas fields of California are located in three areas widely separated. These comprise the San Joaquin Basin, the Coastal Basin and the area immediately adjacent to the San Francisco Bay region. In the latter district Amerada Petroleum Corp. discovered a commercial gas field at Tracy in August, 1935, and up to date six commercial producers have been finished. This field is located in San Joaquin County. A little farther north, Standard Oil Co. proved up the existence of commercial gas production at McDonald Island in San Joaquin County in June, 1936, and Amerada Petroleum Corp. matched this discovery a few weeks later by opening a gas field in the Rio Vista district of Solano County. Up to the close of February, three commercial gas wells were completed by Standard in the McDonald Island gas field and four by Amerada in the Rio Vista gas field. These companies hold all of the productive acreage in the fields discovered by each. In the San Joaquin Basin, dry gas fields have been discovered at Buttonwillow, Semi-Tropic, Buena Vista Lake, Delano, Dudley Ridge and Chowchilla. The Semi-Tropic gas field was discovered in March, 1935, by Standard Oil Co. and the Buena Vista Lake gas field was proved productive by Ohio Oil Co. in July, 1934. Standard's discovery well at Semi-Tropic was No. 1 Hill,

(Continued on Page 34)

Next Week

ANNUAL REFINERY NUMBER

The industry's most complete survey of refining

Engineering **Economics**

Personnel **Plant Data**

Petroleum

A.P.I. Adds 886,000,000 Bbls. to Proven Reserve Estimate

Proven oil reserves of the United States on January 1, 1937, are estimated at 13,063,000,000 bbls., in a report submitted to directors of the American Petroleum Institute by its committee on petroleum reserves. This is an increase of 886,000,000 bbls. over the estimate as of January 1, 1935.

The committee says its calculation is so conservative it will probably have to be revised upward as developments take place. The estimate of January 1, 1935, placed proven reserves at 12,177,000,000 bbls., later raised to 13,632,000,000 bbls. with more complete data on new discoveries.

President Axtell J. Byles said the present estimate must be understood to deal only with "known and proven" reserves.

"It takes no account of possible—indeed, certain—future discoveries. The figures do not mean the country has available only 13,063,000,000 bbls. of oil, but that it has proved reserves up to that amount. These estimates take no account of future findings of oil. They are calculations of what we know we have.

NO SHORTAGE

"The probability is these proven reserves constitute only a small portion of the supply which will be made available. But these reserves do assure there is no imminent danger of shortage. The known and proven reserves of today will be supplemented by new discoveries, as in the past. There is certainty of larger recoveries of oil by continuous improvement in recovery methods."

Estimates of reserves by states, as of January 1, 1937, gave Texas 6,422,000,000 bbls.; California, 2,956,000,000 bbls.; Oklahoma, 1,141,000,000 bbls.; Rocky Mountain states—Wyoming, Montana and Colorado—346,000,000 bbls.; Kansas, 568,000,000 bbls.; Louisiana, 524,000,000 bbls.; New Mexico, 471,000,000 bbls.; Arkansas, 84,000,000 bbls.; and the eastern states—Pennsylvania, West Virginia, Ohio, New York, Michigan, Kentucky, Indiana and Illinois—551,000,000 bbls.; a total of 13,063,000,000 bbls.

J. Edgar Pew, Sun Oil Co., chairman of the committee on petroleum reserves, said he believed the report was the most accurate presentation ever made on reserves. Other members of the committee are: Wallace E. Pratt, Humble Oil & Refining Co., Houston, Tex.; W. B. Heroy, Consolidated Oil Corp., New York.; G. Clark Gester, Standard Oil Co. of California, San Francisco; R. F. Baker, Texas Co., New York; Frank Clark, Ohio Oil Co., Tulsa; Fred E. Wood, Standard Oil Co. (Indiana), Chicago, and F. H. Lahee, Sun Oil Co., Dallas, Tex.

The committee submits a table showing: (A) estimates of proven oil reserves on January 1, 1935, made in October, 1935; (B) estimates of proven oil reserves on January 1, 1935, revised in February, 1937, by the present committee; and (C) estimates of petroleum reserves on January 1, 1937.

The total production during 1935 and 1936 was 2,044,000,000 bbls. The committee estimates that during these two years discoveries (new pools and new pay sands in old pools) amounted to about 1,477,000,000 bbls. A review made in October, 1935, in the light of present information, shows these were too conservative and they have been revised upward 1,455,000,000 bbls., an increase of approximately 12 per cent.

Column A, for January 1, 1935, was made on the basis of data available in 1935. Column C has been made on the basis of information available now. These columns are exactly comparable, and they reveal an increase in estimated reserves amounting to 886,000,000 bbls. On the other hand, Column B is a revision of Column A, based on more complete data concerning the fields, the reserves of which were included in Column A. It is to be expected that future revisions of Column C will be upward.

PROVEN PETROLEUM RESERVES OF THE UNITED STATES

	(A) On Jan. 1, 1935	(B) On Jan. 1, 1935 (revised)	(C) On Jan. 1, 1937
California	3,500,000,000	3,261,000,000	2,956,000,000
	3,500,000,000	3,261,000,000	2,956,000,000
Rocky Mountain States			
Wyoming	250,000,000	267,000,000	239,000,000
Montana	60,000,000	102,000,000	92,000,000
Colorado	12,000,000	16,000,000	15,000,000
	322,000,000	385,000,000	346,000,000
Central to Southern States			
New Mexico	350,000,000	451,000,000	471,000,000
Texas	5,500,000,000	6,643,000,000	6,422,000,000
Oklahoma	1,200,000,000	1,235,000,000	1,141,000,000
Kansas	400,000,000	390,000,000	568,000,000
Arkansas	75,000,000	103,000,000	84,000,000
Louisiana	375,000,000	513,000,000	524,000,000
	7,900,000,000	9,335,000,000	9,210,000,000
Illinois	35,000,000	37,000,000	28,000,000
Indiana	5,000,000	5,000,000	3,000,000
Kentucky	35,000,000	50,000,000	39,000,000
Michigan	45,000,000	64,000,000	44,000,000
New York	40,000,000	75,000,000	66,000,000
Ohio	30,000,000	40,000,000	32,000,000
Pennsylvania	240,000,000	340,000,000	307,000,000
West Virginia	25,000,000	40,000,000	32,000,000
	455,000,000	651,000,000	551,000,000
Total U. S.	12,177,000,000	13,632,000,000	13,063,000,000

(A) As estimated October, 1935, by the A.P.I. special committee on production; subcommittee on known reserves (American Petroleum Industry, 1935, page 35).

(B) Revised February, 1937, by the A.P.I. committee on petroleum reserves as a result of development subsequent to January 1, 1935, of pools discovered prior to that date.

(C) As estimated February, 1937, by the A.P.I. committee on petroleum reserves.

Deep in Louisiana woods.—(LeDoux, Shreveport)

Unionization Campaign to Be Begun in East Texas

With the threat of a strike at the Mid-Continent Petroleum Corp. refinery in West Texas dissipated by an agreement between officials and employes, attention was centered on East Texas and the Gulf Coast, where the committee for industrial organization is scheduled to begin its campaign to unionize the petroleum industry, April 5. Harvey Fremming, president of the International Association of Oil Field, Gas Well and Refinery Workers of America, and other representatives of the CIO were due to arrive in Houston this week to prepare the campaign.

Terms of the agreement at the Mid-Continent plant will be incorporated in a contract to be signed this week.

Some 1,500 employes at the Baytown, Tex., refinery of Humble Oil & Refining Co., have organized the Humble Employes Security League, avowedly to oppose the organization attempt by CIO. W. A. Thomas, chairman of the league, said Humble employes in mass meeting last Saturday voted to oppose the union's efforts and expressed belief 90 per cent of the 3,300 workmen would support the league.

The East Texas field is expected to be the initial battleground for CIO, with employes of the major companies the first objective. Workers in 10 branches of the industry will be contacted by organizers.

Imperial Purchases

COUTTS, Alberta.—Imperial Oil, Ltd., which has been buying through Transit & Storage Co. in Montana has cut its crude runs to less than 40 per cent in Cut Bank and has restricted Kevin-Sunburst purchases. It continued to take crude until its storage at Calgary and Regina was filled. It is expected increased crude production in Turner Valley will supply the Calgary refineries in the future.

SPARKS FROM THE NEWS

Many operators discovered last week they will have to work hard remainder of 1937 to pay income taxes on what they were credited with earning in 1936.

New Mexico, which has reached the 100,000-barrel daily class, reports promising developments in two Lea County wildcats.

Latest reserve estimates add 100,000,000 barrels to Pennsylvania, a development due more to improved secondary recovery methods than to new discoveries.

Nebraska, still searching for its first oil, is interested in Kansas test now being drilled on Barton Arch, 12 miles from state line.

Some refiners are finding they overestimated winter furnace oil demand. Current stock figures indicate they could make same mistake over next few weeks in regard to summer gasoline requirements.

The long-awaited development in Arkansas has materialized with location of first test which it is hoped will extend Rodessa field into that state.

The 4.8 per cent gain in January motor fuel demand is in contrast with 8 to 13 per cent increases reported monthly last year.

I.P.A.A. warning in regard to crude oil and gasoline stock trends comes the week the industry produced 70,690 barrels more crude daily than any previous period in its history.

The modern car's insistence on quality motor fuels is helping refiners solve problem of competition from cheap and inferior gasolines.

Checking old oil wells to see what they may have missed in their anxiety to reach the big pays, has become one of the duties of production departments.

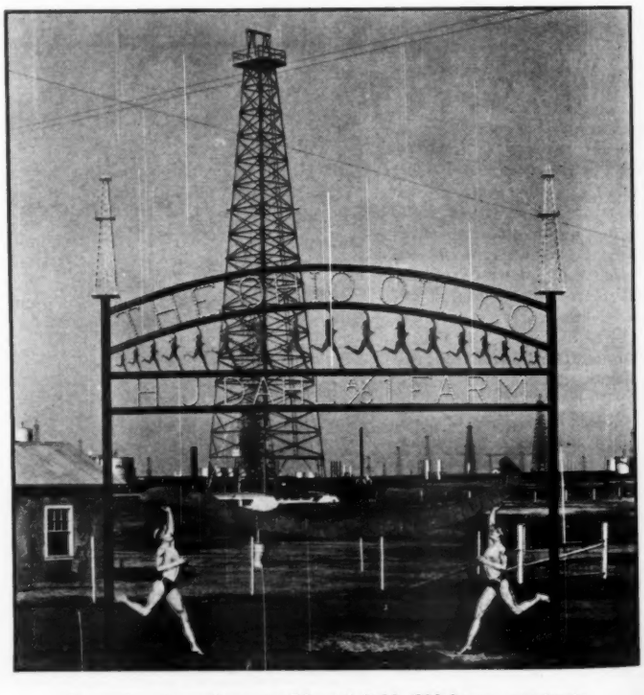
The significance of a 50,000,000-foot gasser can best be visualized when it is realized that based on weight it is equivalent to more than 6,000 barrels of oil.

The Buckeye field, which may prove to be Michigan's most prolific field, is responsible for the state's output once more passing 35,000 barrels daily.

Union organizers are finding the oil worker's attitude toward his job is different from that of worker on the assembly lines of mammoth industrial plants.

A.P.I. Byles points out that new estimate of 13,063,000,000-barrel reserve is based on discoveries up to January 1. It does not take into consideration this year's oil crop and those in the years to come.

SOMETHING NEW IN WELDING



Ingenuity of employes in Edmond field, Oklahoma, constructs elaborate sign from reclaimed material

WHERE NEW DEAL POLICIES ARE DETERMINED: *President Roosevelt, Secretary of the Treasury Henry Morgenthau, Jr., Attorney General Homer S. Cummings, Secretary of the Navy Claude A. Swanson, Secretary of Agriculture Henry A. Wallace, Secretary of Labor Frances Perkins, Vice President John Nance Garner, Secretary of Commerce Daniel C. Roper, Secretary of Interior Harold Ickes, Postmaster General James A. Farley, Secretary of War Harry H. Woodring, and Secretary of State Cordell Hull.—(Copyright by Harris & Ewing)*

Concern Over Increasing Cost of Living and Doing Business

By HENRY D. RALPH

WASHINGTON, D. C.—As argument over the Supreme Court issue grows more intense, it becomes more plain organized labor is backing the plan in hopes it will result in revival of government control of industry similar to NRA.

This idea ran throughout the convention held here last week by Labor's Non-Partisan League, and in literature issued by labor organizations workers are being told wages and working conditions are suffering and union activities made more difficult because of absence of a new NRA.

President Roosevelt gave a new twist to the argument in his fireside chat when he stated the nation is nearing a crisis similar to 1929 and that national legislation is needed to protect us against such a catastrophe. This is the first time the president has hinted the process of economic recovery is getting out of hand. Observers were quick to point out that of all the steps taken to offset the depression, forestall a recurrence of 1929 conditions, and to control economic forces, only the NRA, the AAA and the Guffey coal act were outlawed by the Supreme Court, and they concluded the president must be convinced direct federal control of production, prices, wages and working conditions such as attempted in these three laws is necessary to avoid another business collapse.

INFLATION

Quite independently of the president's broadcast, a number of New Deal advisers are very much worried over the possibilities of inflation. They are concerned about the rapid increase in commodity prices, in the cost of living, and in the cost of doing business; about the failure of the administration to balance the budget on a firm basis; and about the possibilities for a large credit inflation resulting from the government's deficient financing. They are urging the administration to use the powers it already has to prevent runaway prices and inflationary credit conditions. Although sympathizing with the social programs, these advisers within the administration are urging such things be subordinated to control of the economic cycle, particularly its price and credit phases. They argue public works and housing projects should be abandoned now that private construction activity is on the upgrade, but should be held in reserve for a period when building is falling off and building costs are declining. They view with misgiving the growing movement toward increased wages and shortened hours because these will raise prices, which they fear are already rising too rapidly. In their view a rapid and general increase in prices will lead to either a general inflation of credit which will become unmanageable, or sudden consumer resistance which will cause an early end to the recovery movement. Such views are held not alone by persons who might be classed as "tories" and "economic royalists" but by several New Dealers in high administrative posts.

CONGRESS

The senate finance committee has not yet acted on the Connally bill to make the "hot" oil law permanent but is expected to vote a favorable report within the week.

The house has passed and sent to the senate the Vinson-Guffey coal control bill in a form very similar to the original act, except for omission of the labor provisions which the Supreme Court specifically found unconstitutional. The bill contains elaborate price-fixing machinery, which many observers contend will so raise the price of bituminous coal as to permit the oil industry to make heavy inroads into its markets.

Congressional leaders have postponed consideration of new tax legislation until later in the session, possibly by June. The strategy apparently is to postpone consideration of taxes until shortly before the federal gasoline, lubricating oil and other excise taxes expire on June 30, with the idea the shortness of time then will operate in favor of continuing these taxes. Much pressure is being brought by the oil and other industries against their reenactment, while other groups are seeking enactment of new excise taxes, particularly on imports of various products, and, by postponing action until near the deadline, congressional leaders hope to avoid any upsets in the administration's program.

A period of widespread experimentation with resale price maintenance, heretofore largely illegal, is at hand. Both houses of congress are expected to give speedy approval to the Tydings-Miller resale price maintenance bill, already favorably reported by the house judiciary committee. This bill would amend the Federal Trade Commission and Sherman antitrust acts to permit contracts to be made in interstate commerce for maintaining resale prices on trademarked or branded articles to be sold in states permitting price maintenance. Some 26 states already have such laws and the legislatures of many other states are considering them at present.

NAVAL RESERVES

Unexpected opposition developed in the senate naval affairs committee to the Navy Department's bill to permit it to exchange lands and

alter leases in the naval petroleum reserves in California. Capt. H. A. Stuart, director of naval petroleum reserves, told the committee the bill will permit the department to conserve the reserves by preventing excessive production and drainage, but Senator David I. Walsh of Massachusetts, chairman of the committee, declared the blanket power given the department by the bill as it stands will have to be amended and extensive hearings will be required. He expressed the opinion that the Navy should not have complete discretion in dealing with the reserves but that any transfers of lands or leases should be submitted to congress for approval. Captain Stuart said delays involved prevent making a good bargain.

OIL SHALE

The senate committee on naval affairs has favorably reported the Walsh bill, S. 1129, to permit the secretary of the interior to exchange lands with the state of Utah to consolidate the naval oil shale reserve No. 2 in that state. During consideration of this bill Captain Stuart of the Navy Department told the committee enormous quantities of oil can be extracted from oil shale deposits in this country and that a satisfactory extraction process has been developed which will yield 20 or 25 gallons to the ton, but the cost would be around $2 per barrel so it cannot compete with oil obtained from wells at present. He added that if a large-scale industry develops similar to the coal industry, the price could be reduced to a point comparable to present oil prices.

Crude Oil and Refinery Situation Summarized—January, 1937-1936

Supply and Demand—Crude Oil (Bbls.)

January—	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Indicated domestic demand‡	Exports	Stocks refinable crude Jan. 31
1937	99,676,000	101,121,000	1,425,000	1.4	98,567,000	1,129,000	97,525,000	3,596,000	286,759,000
Daily average	3,216,000	3,262,000	46,000	.....	3,180,000	36,000	3,146,000	116,000	.....
1936	90,695,000	92,245,000	1,550,000	1.7	88,820,000	1,875,000	89,178,000	3,067,000	313,081,000
Daily average	2,926,000	2,976,000	50,000	.....	2,865,000	61,000	2,877,000	99,000	.....
Increase, 1937	9,001,000	8,876,000	.....	.....	9,747,000	†746,000	8,347,000	529,000	†26,322,000
Increase, 1937	9.9%	9.6%	.....	.....	11.0%	†39.8%	9.4%	17.2%	†8.4%

Supply and Demand—Refinery Products—Motor Fuels (Bbls.)

January—	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Domestic demand	Exports	Stocks Jan. 31§
1937	44,681,000	36,674,000	*8,007,000	*21.8	44,681,000	.....	33,969,000	2,978,000	75,448,000
Daily average	1,441,000	1,183,000	*258,000	.....	1,441,000	.....	1,087,000	96,000	.....
1936	40,492,000	34,984,000	*5,508,000	*15.7	40,492,000	.....	32,412,000	2,572,000	66,690,000
Daily average	1,306,000	1,129,000	*177,000	.....	1,306,000	.....	1,046,000	83,000	.....
Increase, 1937	4,189,000	1,690,000	.....	.....	4,189,000	.....	1,284,000	406,000	8,758,000
Increase, 1937	10.3%	4.8%	.....	.....	10.3%	.....	4.0%	15.8%	13.1%
January—				**Kerosene**					
1937	5,923,000	5,934,000	11,000	0.2	5,923,000	.....	5,297,000	637,000	5,622,000
1936	4,761,000	6,077,000	1,316,000	27.6	4,761,000	.....	5,569,000	508,000	6,599,000
Increase, 1937	1,162,000	†143,000	.....	.....	1,162,000	.....	†272,000	129,000	†977,000
Increase, 1937	24.4%	†2.4%	.....	.....	24.4%	.....	†4.9%	25.4%	†14.8%
January—				**Gas Oil and Fuel Oil¶**					
1937	41,910,000	46,464,000	4,554,000	10.9	40,443,000	1,467,000	42,895,000	3,569,000	102,364,000
1936	38,195,000	41,678,000	3,483,000	9.1	37,080,000	1,115,000	38,682,000	2,996,000	100,501,000
Increase, 1937	3,715,000	4,786,000	.....	.....	3,363,000	352,000	4,213,000	573,000	1,863,000
Increase, 1937	9.7%	11.5%	.....	.....	9.1%	31.6%	10.9%	19.1%	1.9%
January—				**Gas Oil and Distillate Fuels**					
1937	13,393,000	17,024,000	3,631,000	27.1	13,319,000	74,000	14,856,000	2,168,000	19,088,000
1936	10,587,000	13,099,000	2,512,000	23.7	10,587,000	.....	11,764,000	1,335,000	17,418,000
Increase, 1937	2,806,000	3,925,000	.....	.....	2,732,000	74,000	3,092,000	833,000	1,670,000
Increase, 1937	26.5%	30.0%	.....	.....	25.8%	.....	26.3%	62.4%	9.6%
January—				**Residual Fuel Oils**					
1937	28,517,000	29,440,000	923,000	3.2	27,124,000	1,393,000	28,039,000	1,401,000	83,276,000
1936	27,608,000	28,579,800	971,000	3.5	26,493,000	1,115,000	26,918,000	1,661,000	83,083,000
Increase, 1937	909,000	861,000	.....	.....	631,000	278,000	1,121,000	†260,000	193,000
Increase, 1937	3.3%	3.0%	.....	.....	2.4%	24.9%	4.2%	†15.7%	0.2%
January—				**Lubricating Oils**					
1937	2,649,000	2,423,000	*226,000	*9.3	2,649,000	.....	1,763,000	660,000	7,168,000
1936	2,309,000	2,207,000	*102,000	*4.6	2,309,000	.....	1,396,000	811,000	7,127,000
Increase, 1937	340,000	216,000	.....	.....	340,000	.....	367,000	†151,000	41,000
Increase, 1937	14.7%	9.8%	.....	.....	14.7%	.....	26.3%	†18.6%	0.6%
January—				**Petroleum Wax (Lbs.)**					
1937	43,814,000	46,958,000	3,144,000	7.2	41,720,000	2,094,000	29,160,000	17,798,000	107,490,000
1936	47,008,000	43,047,000	*3,961,000	*9.2	44,800,000	2,208,000	24,901,000	18,146,000	118,636,000
Increase, 1937	†3,194,000	3,911,000	.....	.....	†3,080,000	†114,000	4,259,000	†348,000	†11,146,000
Increase, 1937	†6.8%	9.1%	.....	.....	†6.9%	†5.2%	17.1%	†1.9%	†9.4%

*Excess supply. †Decrease. ‡Crude oil only. §Includes finished, unfinished refinery gasoline and natural gasolines. ¶Gas oil and fuel oil equals gas oil and distillate fuels plus residual fuel oils. Note: Total supply equals domestic production plus imports. Total demand equals domestic demand plus exports. Data on demand for refined products are based on refinery shipments.

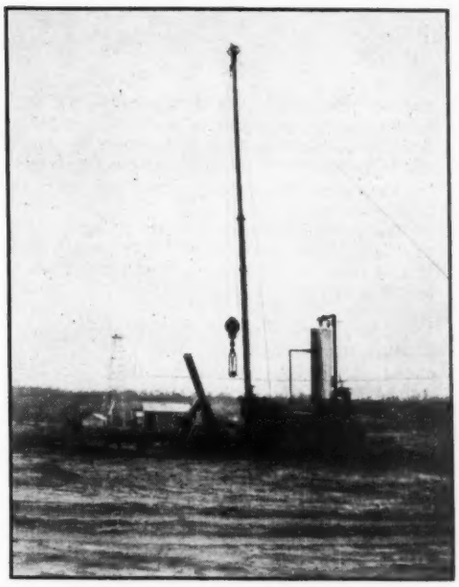
Crude Oil Run to Stills and Total All Oils (Bbls.)

January—	Total imports§	Total exports§	Total crude to stills	Per cent yield gasoline‡	Nat. gasoline production	Total supply all oils*	Total demand all oils*	Stocks all oils Jan. 31
1937	2,988,000	11,531,000	94,179,000	46.3	3,732,000	105,534,000	104,049,000	520,131,000
Daily average	96,000	372,000	3,038,000	....	120,000	3,404,000	3,356,000	.....
1936	3,563,000	10,162,000	85,776,000	46.1	3,653,000	96,222,000	96,446,000	541,476,000
Daily average	115,000	328,000	2,767,000	....	118,000	3,104,000	3,111,000	.....
Increase, 1937	†575,000	1,369,000	8,403,000	....	79,000	9,312,000	7,603,000	†21,345,000
Increase, 1937	†16.1%	13.5%	9.8%	....	2.2%	9.7%	7.9%	†3.9%

*Total all oils includes crude and refined products, natural gasoline and benzol. †Decrease. ‡Includes natural gasoline blended at refineries. §Includes crude oil and refinery products. In case of imports includes receipts in bond and for domestic use. All data based on Bureau of Mines reports.

Senora Sand Proves Profitable Zone For Olympic Operators

By DAL DALRYMPLE



Pulling machine in Olympic field

Where will the Olympic field stop? The answer awaits results of future drilling operations; for today, more than 18 months after the discovery of shallow Senora sand production, definition of the northern limits of the field still is a matter of conjecture. Many operators who have been attracted to this prolific Oklahoma sector hope, as they go about the business of blocking up acreage to the north, northeast and northwest of the proven producing area, the answer will be delayed a long, long time.

The south end of the original Olympic pool, in Hughes County, definitely has been defined by failures on three sides. As production was pushed northward into southwestern Okfuskee County, dry holes occasionally were drilled here and there on the east and west flanks, but these did not faze the operators. They pushed ahead, continued to extend the field in a generally north by east direction—and still are doing so.

The Senora sand producing area, which includes both the Olympic and North Olympic pools and extensions, now extends like a long finger between the Cromwell field of Seminole County on the west and the Bearden gas area of Okfuskee County on the east. There are some who believe it will spread out, like a fan, and extend toward both Cromwell and Bearden. Although some deep dry holes have been drilled between Olympic and Cromwell, some oil men profess to believe the Olympic producing area eventually will swing around those failures, and extend westward to the Cromwell field. Indeed, some of the Olympic operators believe it possible Senora production may even be found in the Cromwell field. They point out that in the heyday of Cromwell, few drillers knew what Senora sand was and passed it up as they raced for the deeper Cromwell sand pay. It is not beyond reason, some of these optimistic operators insist, to think that the Senora formation may pay off around Cromwell as well as in the proven Olympic area.

BLOCKING ACREAGE

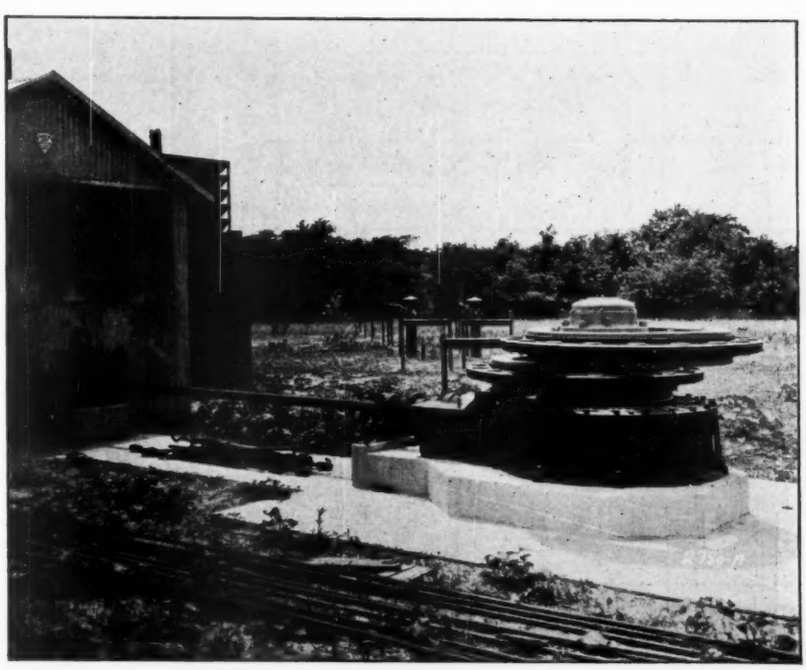
Whatever the justification of their theories, the fact remains that much acreage has been blocked to the north, east and west of the present proven Senora sand producing area. Some of this is protection acreage; other tracts will be tested in the near future.

Credit for the discovery of Senora sand production in the Olympic field goes to George Manahan, head of the Manahan Oil Co. and Manahan Drilling Co. and one of the more active independent operators of Oklahoma. The big play started back in the summer of 1935, following the more or less accidental discovery of shallow production by the Manahan company.

The Potco Oil Co. and associates completed a 40-bbl. well in Cromwell sand at No. 1 McCaslin, in NW NW section 12-9n-8e, northwestern Hughes County.

The Manahan Oil Co. owned the 40-acre tract offsetting the Potco lease on the south. Following completion of the Potco well, work was started at the Manahan No. 1 Dixon A, NE SW NW section 12-9-8. It was a failure in the Cromwell sand, but oil showings had been found in cores of the Senora formation above. Then operators thought it was Calvin, Booch or a stray sand. Mr. Manahan decided to plug back and test the shallow horizon. The experiment was successful, the first Senora sand producer was completed and the big activity at Olympic was not slow in getting started.

The play first extended south from the Senora discovery, several Senora producers being completed in what now is the extreme south end of the field on tracts owned by the Manahan, Saco, Oklahoma Oil and Hayes companies. It wasn't long, however, until dry holes curbed activity in that direction and the operators turned to the north of the discovery well in their search for more Senora production. Numerous Senora producers were completed in sections 1 and 2-9n-8e, a few in section 6-9n-9e, and the field was extended right up to the Okfuskee County line.



Type of power in use in the Olympic field—where modern equipment prevails

CROSSES COUNTY LINE

In the meantime, Manahan Oil Co. had started work at No. 1 Dalton, a wildcat in SE section 36-10-8, across the county line in Okfuskee County. It was completed as a Senora producer in February, 1936, and more wells were started in that sector. It was not long until the main Olympic pool of Hughes County and the Okfuskee extension area were connected, with numerous producers being completed in the intervening area. The producing limits were pushed northward rapidly during the past year and the North Olympic pool in sections 18 and 19-10-9 was opened. It is only a matter of a short time before the gap between Olympic and North Olympic is closed and the entire area will be one long, narrow field.

Completions of the past week show how the Senora producing area is being pushed northward. In the North Olympic area, Howard-Sherman and others No. 1 Bridges, NW SW SW section 8-10-9, topped Senora sand at 1,846 feet; was bottomed at 1,882 feet; oil rose 1,000 feet in the hole, with a showing of water; was plugged back to 1,880 feet, shot and pumped 46 bbls. of oil in 24 hours. On the northeast side of production, Blackwell Oil & Gas Co. and Phillips Petroleum Co. No. 2 Lehmer, SW NW NW section 17-10-9, pumped 100 bbls. of oil in 24 hours after a shot, from Senora sand at 1,856 feet; total depth, 1,925 feet.

Five other oil wells, shown on the accompanying map as drilling wells, were completed the past week. The largest producer was Stanolind Oil & Gas Co. No. 5 Bunner, NE cor. section 25-10-8, which flowed 481 bbls. of oil through tubing in 24 hours after a shot. It had Senora sand at 1,828 feet; total depth, 1,848 feet. The same operators completed No. 4 Fisher, NW SW SW section 19-10-8, and No. 5 Fisher, SE SW SW section 19, as 227-bbl. and 175-bbl. wells, respectively. The two Fisher wells lessen the gap between the Olympic and North Olympic areas.

Manahan Oil Co. completed

another producer at No. 2 Bunner A, NE SE SE section 24-10-8, with initial production of 140 bbls. from Senora sand at 1,842-47 feet, total depth. This makes 70 producers completed in the Olympic field by the Manahan company, against only three failures.

The other completion was the Chapman & McFarlin No. 5 Williams, NE NW NW section 30-10-9. It had sand at 1,756 feet; total depth, 1,800 feet, and flowed 114 bbls. in 24 hours.

SEVERAL NEAR COMPLETION

With these completions, there now are 268 completed oil wells in the Olympic field. In addition, several others are certain producers, showing oil and due to complete this week or next.

Four new operations were reported the past week, a low number for that busy district. They are: Chapman & McFarlin No. 12 Williams, NW NE NW section 30-10-9; Sinclair Prairie Oil Co. No. 6 Fisher, SW NW SW section 19-10-9; No. 7 Fisher, SW SE SW section 19-10-9, and Manahan Oil Co. No. 4 Bunner A, NE NE SE section 24-10-8.

A take-off of operations in the field last week revealed three drilling wells and one location on the Hughes County side and 26 drilling wells, four rigs and three locations on the Okfuskee County side.

Daily average production last week was 15,575 bbls. Total production has been increasing consistently with completion of new wells.

Average depth of the wells in the south end of the field is about 1,750 feet. In the north end, depths range generally from 1,850 feet to 1,900.

The sand thickness ranges from 10 to 71 feet, but not all of this is producing horizon. Usually, on the west side of the field, sand thickness ranges from 40 to 60 feet, but only from 5 to 10 feet is drilled, with production of most wells on the west side ranging from 50 to 75 bbls daily.

GREATER SAND BODY

More sand is found on the east side, and a greater body is taken, generally from 40 to 60 feet. Some of the east side wells came in as large producers, but now average from 15 to 45 bbls. daily.

Gas prevails on the east side; water on the west side. This accounts for the drilling of a lesser amount of sand on the west side.

Some of the larger producers have been drilled on inside or middle locations. These range from 75 to 400 bbls. when completed, and many of the larger wells continue to produce from 150 to 200 bbls. daily long after completion.

The largest producer yet completed in the field was Manahan No. 3 Black, NE NE SE section 25-10-8, with initial yield of about 1,000 bbls. The Black lease is the best 40-acre tract in the field, four wells on it having potentials ranging from 400 bbls. to 1,000 bbls.

Chapman & McFarlin have the best 80-acre lease in the Cudjo tract, S half SE section 25-10-8. It has eight producing wells.

One of the best 160-acre tracts in the field is the Blackwell Oil & Gas Co.'s Dalton lease in NE section 36-10-8. Sixteen producing wells were completed on it in a short time, and several of them still are flowing. Sinclair Prairie Oil Co. also completed 16 producers on its 160-acre Oliphant lease in SE section 1-9-8.

The most productive section in the field to date is section 1-9-8. Sixty wells out of a possible 64 in this section have been completed as producers, and there is a possibility four other wells will be drilled on the section. In fact, three locations already have been staked.

AVERAGE RECOVERY

Average recovery is placed at 10,000 bbls. an acre, with the range from 8,000 bbls. to 15,000 bbls. an acre.

When the Senora sand area is drilled up, other horizons may be productive in the Olympic area. The Potco Oil Co. already has one Calvin sand well and one Cromwell sand well on its lease in N half NW section 12-9-8. The Calvin sand was found at 1,400-1,500 feet; Senora at 1,700-1,800 feet, and Cromwell sand at 3,774 feet.

The Calvin sand has been cored in many wells completed in Senora sand, several having showings of oil and gas in the Calvin. That horizon may come in for later development.

With the exception of the Potco company's Cromwell sand well, other deep tests drilled in the Olympic area have been dry.

Gravity of the Senora sand oil is from 34 to 36 degrees. It is a black oil, some of the production from east side wells containing paraffin.

A majority of the producers have been completed as flowing wells. Many flow from 30 to 60 days after completion. Some have flowed as long as one year and still are flowing.

Gas volume in Senora wells ranges from 50,000 feet to 6,000,000 feet.

Rock pressure when wells are first drilled in ranges from 300 to 800 pounds.

COMPLETED QUICKLY

A Senora sand well can be completed in about 12 days, if nothing occurs to delay drilling.

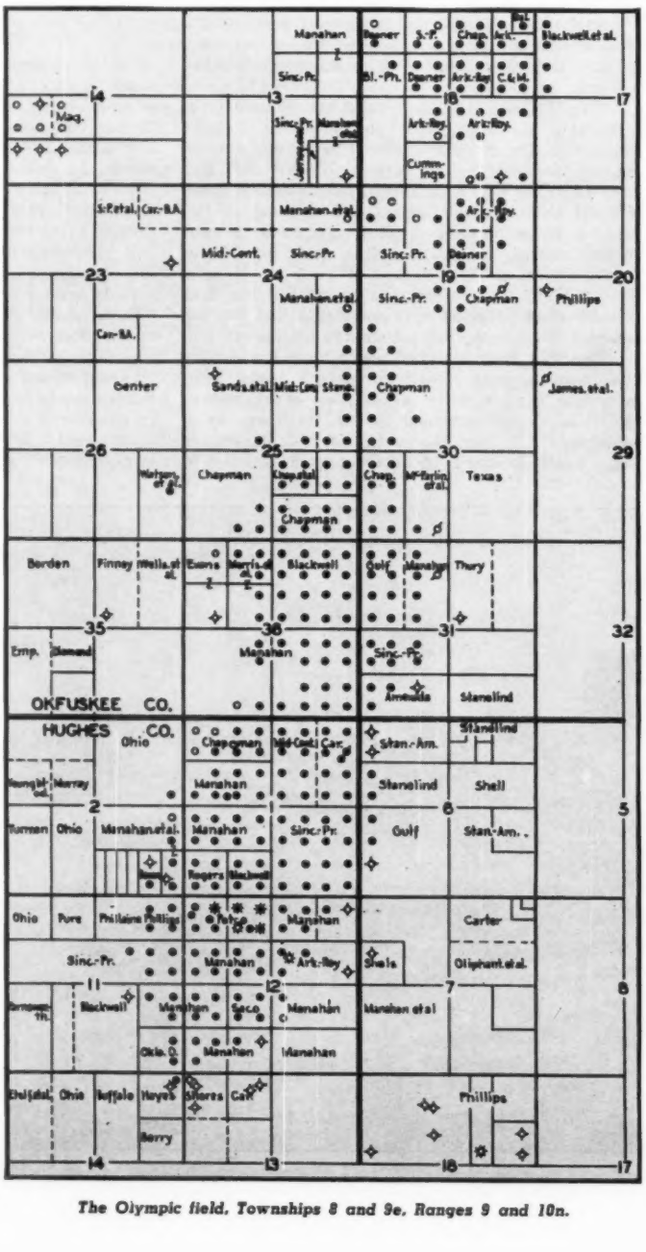
Operators in this happy field have had to cope with few engineering problems. Little trouble is experienced in producing the wells if they are cleaned out properly.

A great majority of the wells are drilled with rotary to top of the sand, 7-inch casing is set and then drilled in with spudder. Portable rotary equipment, which may be skidded from one location to another, is popular with Olympic operators. Wells usually are drilled without derricks, the rotary being set under an A-mast gin-pole. Derricks are scarce, the few being confined largely to the south end of the field. Portable tractors with telescope masts are used to service the wells. Practically all wells are produced with power, or individual pumping units. The latest, modern pumping equipment is common to the field.

Mid-Continent Petroleum Corp. has a gasoline plant on the Potco lease.

Sinclair Prairie Pipe Line Co. and Magnolia Petroleum Co. lines take the oil.

Senora sand production was something new under the sun when it was uncovered by the Manahan Oil Co. in the summer of 1935. But it has been paying off in no uncertain manner in the Olympic field. In this day of 10,000 and 12,000-foot wells and deep sand producers drilled at almost prohibitive costs, the shallow Senora production looks good to many oil men. Shallow pay, short drilling periods, long flowing wells, and economy of operations combine to make the Olympic one of the outstanding fields of Oklahoma—a joy alike to independents and big companies.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HUGHES CO.
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Sinc.-Pr.
Mid-Cont.
Chapman
Texas
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Carter
Oliphant et al.
Manahan et al
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Hayes
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Pure
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Thury
Center
Sands et al
James et al
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Third-Grade Gasoline Seems Drifting Toward Oblivion

By T. F. SMILEY

Third-grade gasoline seems headed for a place alongside the dodo, the sea-cow and other extinct things. That is, of course, third-grade gasoline as it is today, with a maximum octane rating of 62 and a minimum of whatever the type of crude used happens to make it.

There is a strong probability that three pumps will continue to rise in front of the filling station. One will serve premium motor fuel; one the regular, or house brand. And there may be one for gasoline selling at 2 cents or so less than the regular, but with an octane number higher than that of the material now designated as third grade. There is probability it will have a definite octane bottom. The third grade which the motorist buys at the present time is classified vaguely as "62 octane and below." Drivers operating low-compression cars under favorable conditions testify they have obtained satisfactory performance from a 62-octane fuel. But that "and below" covers a multitude of knocks. And as more and more high-compression engines come into use the gentle dub-dub is converted into kettledrums at their most hilarious moments.

Third-grade gasoline entered the market scene, or was shoved into it, in April, 1931, in the hope it might prove an effective weapon for meeting the competition of trackside stations and the flood of cheap motor fuel which, beginning to pour out of East Texas, threatened to engulf the market. It is a matter of mournful history that it did engulf the market.

Given big-company recognition first by the Standard Oil Co. (Indiana), major marketing organization in 10 states of the Middle West which consume 30 per cent of the country's gasoline, the newcomer soon was adopted—in some cases reluctantly—by other companies. Before long marketing policy had been revolutionized. Whatever else may be said about the drastic change, it was a fine thing for the manufacturers of gasoline pumps. But it appears to have created more problems than it solved. Students of oil-trade currents say third-grade gasoline of present-day specifications is on its way out. They offer a variety of reasons.

First might be mentioned the dwindling importance of East Texas as a market factor. The term "hot oil," formerly the most familiar in the vernacular of petroleum and symbolic of that field, is falling into disuse. Thanks to tender boards which have enforced the law, to the good sense of operators themselves, and to orderly crude production, East Texas no longer is an outlaw.

During the period of the East Texas debauch gasoline from that area ordinarily meant third-grade gasoline. It was a good gasoline in its classification, and it rolled in tidal waves to distant markets. But now East Texas, once the primary source of low-octane motor fuel, is turning increasingly to the cracking process and it is producing large quantities of the middle-grade material with a 63-67 octane rating. This middle-bracket material is a sort of orphan in the family of motor fuels. Regardless of the fact published tankcar prices for most of the territory between the Rocky and the Appalachian mountains include the 63-67 bracket, it is not offered at service stations as such and the car owner knows of just three kinds of gasoline, which he usually designates as third grade, regular and premium.

According to rough estimates, 30 to 35 per cent of the gasoline consumed in Texas in 1934 and 1935 was third grade. The percentage was higher than in any other part of the country. It is not hard to find the reasons. First, there was the price. Driving up to the filling station to get the tank filled is not a philanthropic enterprise. It is a business transaction in which the motorist's purpose is to get the most possible for his money. Although the federal tender board got into operation in 1935, making it difficult or impossible for East Texas gasoline made from illegally produced crude to get outside the state, Texas itself offered an immense area for the retailing of this material, which could be sold at the pump for 4 to 7 cents less than the price charged for the regular grade, made from lawful crude.

The state tender board too was functioning with wholesome effect, but great quantities of East Texas gasoline barred from interstate shipment were eligible for state tenders, which imposed less rigorous restrictions. Then there was for a long time a flourishing intrastate trucking business through which gasoline which could not obtain even state tenders was moved to distant parts of the state for distribution at cut prices.

Both climatic conditions and vast stretches of plains country aided the sale of this cheap gasoline in Texas. The same fuel used in colder regions of the north or in hill-climbing produced a volley of detonations calculated to drive the motorist to gasoline of higher antiknock quality, even though it cost more. And there was another condition which contributed to sales of third-grade gasoline in Texas and in other states where similar climatic and topographical characteristics prevailed. This was the fact level roads and mild weather made it possible to keep the old car, with its low-compression engine, in service much longer than could have been done elsewhere.

While the Texas motorist had a particular advantage over his neighbor in other states in the wide price spread between low-octane motor fuel and that in the higher brackets, the flood of cheaply produced East Texas material exerted a depressing effect on third-grade prices in northern markets; for the East Texas refiner, even though he operated on lawfully produced crude, usually had scant storage facilities and as soon as his stock became larger than he could handle he got rid of his surplus by making concessions to buyers outside the state.

Changing conditions have gone far to close the price gap between the third-grade and the higher-bracket gasolines. Orderly operation has supplanted chaos in East Texas. The enormous quantities of illegal crude stored in open pits and tanks have disappeared. Buyers of crude, instead of being able to name their own price (the posted price for a time in East Texas was 10 cents a barrel), are seeking connections. Hot oil and its derivatives have vanished, and with them has gone the former low-price lure of third-grade gasoline, which now usually sells for only 2 cents less than the regular, with its distinctly better performance.

One of the most telling reasons for the fading popularity of third-grade gasoline—really the most important reason of all—lies in the demand of the modern automobile for a high-octane fuel in order to get the best performance from it. Most of the new cars moving onto the highway from the manufacturing plant are designed to use a gasoline of 70 octane or higher. Every time an old car is junked and a bright new model takes its place the demand for high-octane motor fuel is increased and the position of third-grade quality recedes; for there is a diminishing disposition on the part of the owner to use the cheap fuel even though he is on a long drive on level roads, when he might get along fairly well with a low-octane gasoline.

In this connection an interesting side-light is found in the practice adopted by some operators of fleets of taxicabs and light trucks, who have reduced the compression of their engines and adapted them mechanically to run satisfactorily at slower rates of speeds in city streets on third-grade gasoline. However, as the price spread between third-grade and regular narrows there is a lessened tendency to resort to this species of economy. Furthermore, some companies owning such automotive fleets have discovered that after they have gone to the trouble of making this mechanical adjustment their drivers "step on it" at every opportunity, with consequent pounding and injury of the engine which may wipe out the saving ef-

(Continued on Page 34)

Why They Don't Ask for Third Grade

The steadily climbing compression ratio of the automobile presents the principal reason for the declining demand for low-octane gasoline. Here is shown the average compression rise of American passenger cars from 1925 to 1937, with the accompanying increase in maximum horsepower and horsepower per cubic inch:

Year—	Maximum horsepower	Horsepower per cubic inch	Compression ratio
1925	59.046	0.234	4.40
1926	60.67	0.246	4.47
1927	64.26	0.256	4.55
1928	72.18	0.285	4.86
1929	81.37	0.311	4.99
1930	90.97	0.336	5.15
1931	93.12	0.342	5.23
1932	103.5	0.359	5.29
1933	106.49	0.364	5.57
1934	111.21	0.384	5.72
1935	109.70	0.399	5.99
1936	113.20	0.408	6.16
1937	115.10	0.416	6.25

A. P. I. Production Division Program for Southwestern District Meeting

Plans for the program for the spring meeting of the southwestern district of the American Petroleum Institute Division of Production to be held in Dallas, Tex., April 1-2, at Baker Hotel, have been completed.

On Thursday afternoon, April 1, Wallace E. Pratt, vice president, Humble Oil & Refining Co., will address the meeting on "Trends and Potentialities of Oil Development in Southwestern United States." W. R. Boyd, Jr., executive vice president, American Petroleum Institute, and George A. Hill, Jr., vice president in charge of the Production Division, will speak on subjects to be announced later. M. J. Norrell, vice president, Magnolia Petroleum Co., will deliver the address of welcome. A new viewpoint on the taxation problem will be presented by Jake Hamon of Cox & Hamon, who will speak on "Taxation—An Overriding Royalty."

An interesting technical program is in the course of preparation, with the following papers:

"Foundations and Substructures in the Gulf Coast," by W. F. Herbert, Texas Co., Houston, and H. E. Anderson, Texas Creosoting Co., Houston.

"Modern Developments and Applications in Steam Power," by George B. Kitchell, Humble Oil & Refining Co., Houston.

"New Developments in Well Completions in Texas Gulf Coast and Southern Louisiana," by I. W. Alcorn, Pure Oil Co., Houston; J. U. Teague, Humble Oil & Refining Co., Houston, and W. A. Alexander, Shell Petroleum Corp., Iowa, La.

"Blowouts and the Development of Mechanical Control Equipment," by Madden T. Works, Cameron Iron Works, Houston.

"Capacity Pumping of Oil Wells," by S. B. Sargent, Sargent Engineering Corp., Huntington Park, Calif.

"Flow of Mixtures of Oil and Water Through Sand," by F. B. Plummer, J. C. Hunter, Jr., and E. H. Timmerman, University of Texas, Austin.

"Causes and Prevention of Blowouts While Drilling," by Charles B. Carpenter, U. S. Bureau of Mines, Dallas.

A. G. Levy (Texas Co., Shreveport, La.) is chairman of the program committee.

The committee on arrangements follows: John A. Ritter, chairman, Sun Oil Co.; H. W. Bass, Bass Drilling Co.; F. I. Brinegar, Continental Supply Co.; Bruce Clardy, Heyser-Heard & Clardy, Inc.; Casey Cunningham, Standard Oil Co. of Texas; C. L. Gladden, Magnolia Petroleum Co.; N. G. Guiberson, Guiberson Corp.; George A. Hays, Jr., Oil Well Supply Co.; E. N. Koonsman, Pittsburgh-Des Moines Steel Co.; W. D. McBee, M. J. Delaney, Inc.; W. H. Meier, Atlantic Refining Co.; Elmer Schmidt, Lone Star Gas Co.; Eric Schroeder, Kibele Manufacturing Co.; Melbert Schwartz, Seaboard Oil Co.; K. C. Sclater, Petroleum Engineer; E. L. Smith, E. L. Smith Oil Co.; Paul P. Steed, Lion Oil & Refining Co.; and J. E. Warren, Carl B. King Drilling Co., all of Dallas.

Supreme Court Will Hear Price Discrimination Case

WASHINGTON, D. C., Mar. 15.—The Supreme Court granted certiorari today in two cases involving alleged violation of the price discrimination sections of the Clayton act by Socony-Vacuum Corp. and Standard Oil Co. of New York.

Socony-Vacuum and Standard were upheld by the Circuit Court of Appeals for the first circuit, and the charges of violation were overruled.

Nathan Lipson, a retail gasoline dealer in Massachusetts, and petitioners for certiorari charged the action of the Circuit Court unduly limits the scope of the Clayton act by limiting its application to sales in original packages; that the Circuit Court's definition of price discrimination is faulty; and that although dealers who refuse to sell one product exclusively can sell at the same price as dealers who handle one product exclusively, there is still a substantial lessening of competition by allowing a wholesaler to sell at a lower price to one who handles his products exclusively.

Ethyl Sales in Canada

Canadian consumption of Ethyl gasoline in 1936 gained 53.42 per cent over 1935, according to J. N. Fitzgerald, Toronto representative of Ethyl Gasoline Corp. The rate of increase was more than double that in the United States.

Total Ethyl gallonage in the Dominion reached the record figure of 69,296,132 compared with 45,166,389. The biggest gain, 162 per cent, took place in British Columbia, where 3,571,844 gallons were used in 1936 against 1,361,196 in 1935. The British Columbia gain in all gasoline consumed in 1936 was only 11 per cent.

Humble to Drill in Gulf

HOUSTON, Tex.—A public hearing on the application for a permit to drill in the Gulf of Mexico, made by Humble Oil & Refining Co., will be held at the United States engineer's office at Galveston March 19. Plans submitted by Humble for the proposed derrick and connecting structures show a derrick structure and platform 60 feet wide and 90 feet long at an elevation of 14 feet above the water surface at mean low tide, supported by timber piling foundations. The platform is to be connected with the shore by a pipe supported runway 14 feet wide and 4,300 feet long. Paralleling the runway and extending from the shore to the platform there is to be an electric power cable 35 feet above the surface of the water.

Increasing Stocks Hinder Price, Says Roeser

Charles F. Roeser, president of the Independent Petroleum Association of America, says constantly increasing storage of oil is retarding boosts in the price of crude.

His statement came as association committeemen from 10 states gathered at Oklahoma City for an executive session.

"A fair price for average 36-gravity crude in the Mid-Continent is $1.60 a barrel," he said. "We have to have that price to insure a profitable operation of all the type wells we have in this district. We can get the price only by keeping a strict balance between supply and demand.

"Overproduction or increase in stocks of all kinds and overdrilling in some of the fields are contributing factors to delaying higher prices."

Mr. Roeser said refiners and crude purchasers alike were increasing their stocks. He said largest increases were in Texas, where the allowable has been increased over the Bureau of Mines estimate for the last few months.

Russell B. Brown, general counsel of the association, advised the states to stand by the Bureau of Mines estimates of market demand in fixing oil production allowables.

THE MARKETS*

CRUDE OIL: ***Market generally firm despite gain of 70,000 bbls. daily over peak of previous week. Desire to expand refinery operations at this time due to fear of shortage of finished products later because of labor difficulties, may be factor in active demand for new crude supplies.***

REFINERY: ***Lubricating oils strongest product as regards price advances in refinery list. Shipments of gasoline increasing with more interrefinery buying. Movement of furnace oil distillates continues seasonal decline and prices are shaded by sellers seeking spot orders. Kerosene easier. Residual fuel oils strong.***

TANK-WAGON AND SERVICE STATION: ***Scattered reductions in gasoline service station and kerosene tank-wagon prices in Standard of Kentucky territory.***

FINANCIAL: ***Several stocks advance to highest levels since 1929. Average for 30 representative stocks advance to highest levels since 1929. Average for 30 representative stocks for week ending March 13: High, 45.26; low, 42.82; close, 43.94. For week ending March 6: High, 43.83; low, 41.90; close, 43.25.***

**Detailed information in Market Section.*

Pacific Western Injunction Against Mission Corp.

A temporary restraining order prohibiting the directors of Mission Corp., holding company, from liquidating or distributing its share in Tide Water Associated Oil Co. and Skelly Oil Co. was issued in district court at Reno, Nev.

Pacific Western Oil Corp., as a stockholder in Mission, obtained the order on complaint charging Mission officers with "conspiring" to dispose of assets of Mission, which consist of control in Skelly and stock in Tide Water Associated.

The suit asked a permanent injunction be issued and that a receiver be appointed.

Richfield Oil Corporation Elects New Officers

LOS ANGELES, Calif.—Directors of the new Richfield Oil Corp. at their first meeting elected Charles S. Jones president and H. F. Sinclair chairman of the board of directors. William C. McDuffie was named chairman of the executive committee; W. Alton Jones, chairman of the finance committee; A. M. Kelley, vice president in charge of refinery; M. R. Gross, treasurer; Morgan Lowery, secretary; R. J. Pagen, controller, and E. B. Downey, assistant secretary-treasurer.

In addition to Mr. McDuffie, the executive committee includes W. Alton Jones, George MacDonald, H. F. Sinclair, Joseph M. Schenck, Charles S. Jones, and Fred H. Bartlett. Members of the finance committee are the same as the executive committee with the addition of Richard W. Millar.

Complaint on Tire Contracts

WASHINGTON, D. C.—The Federal Trade Commission has issued a complaint against Texas Co. for use of exclusive dealing contracts in leases to service station operators. The complaint charges the company contracted to distribute tires and accessories of several manufacturers and forced its dealers and lessees to refrain from handling competing lines.

Majewski Asks Immunity

MADISON, Wis.—A plea for immunity on grounds that he was compelled to testify before a federal grand jury after it had indicted him in the oil case and was forced to produce documents under threats of government counsel has been filed here on behalf of Bernard L. Majewski, Chicago, vice president, Deep Rock Oil Corp., in charge of marketing.

A plea in bar, filed by Mr. Majewski, will be argued in April before Judge Patrick T. Stone. Mr. Majewski already has been released by special order from his oath of secrecy taken before the grand jury.

New Mexico Legislature Levies Severance Tax

SANTA FE, N. M.—The New Mexico legislature has enacted a state severance tax upon the exploitation of natural resources and sent it to Gov. Clyde Tingley, who pleaded for its passage. Passage came with senate concurrence in a house amendment raising the tax rates on gas and oil from 1 to 2 per cent.

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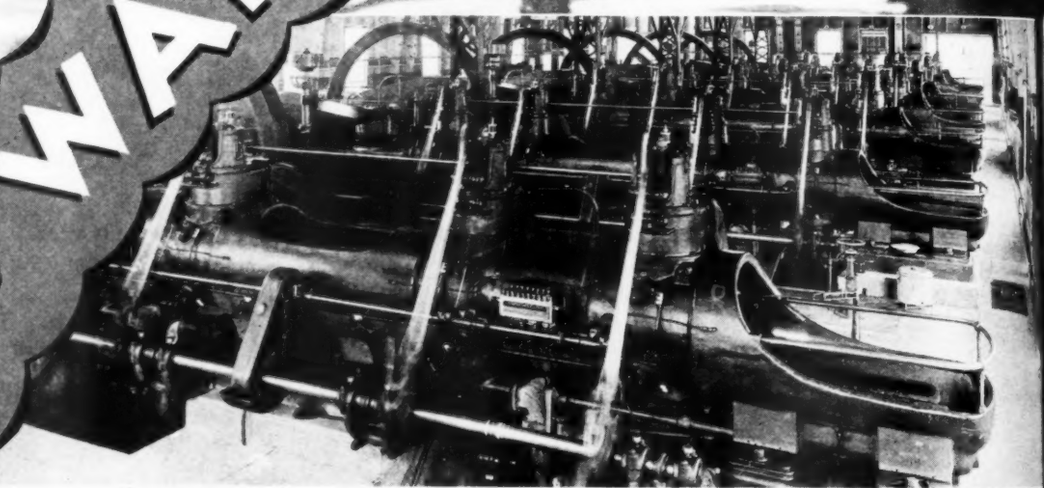
WITH Tube-Turns and welding you're always *on top*—your piping never "gets you down"! The initial installation is easier and less expensive. Plus that, you know there'll never be corroded threads, bad joints, leaky gaskets. You *eliminate* maintenance . . . . If you're planning any sort of piping work, write for the facts about Tube-Turns and welding. That's all we ask . . . . Tube-Turns, *Incorporated*, 224 East Broadway, Louisville, Kentucky.

★ The word "Tube-Turn" is NOT a general name for welding fittings. It is the copyrighted name of the products made by Tube-Turns, Incorporated, under their patents.

WATER · WATER · EVERY

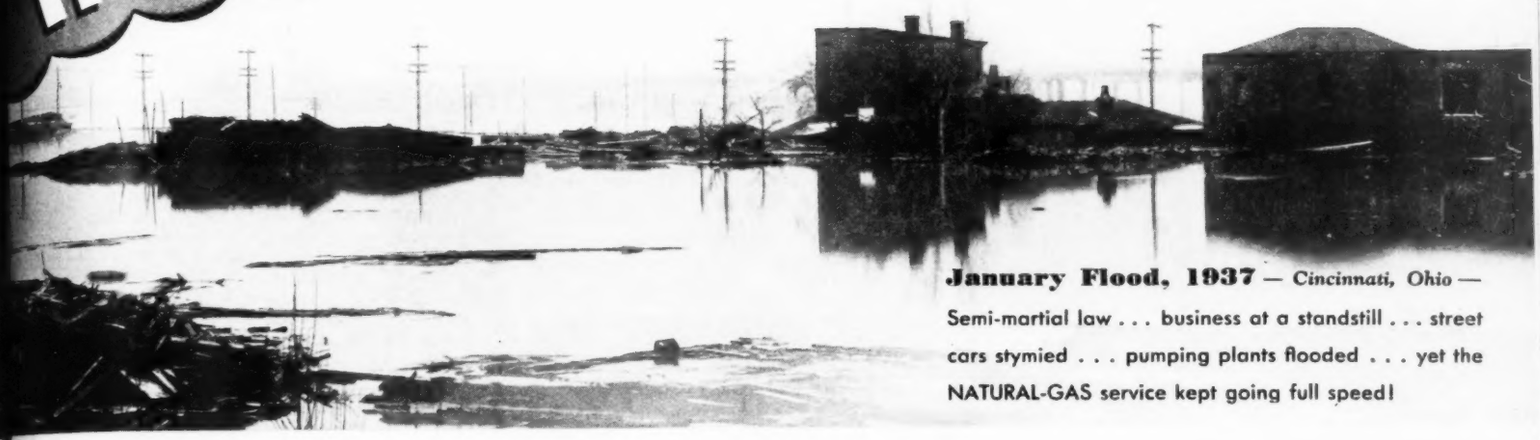
March Flood, 1936—*Pittsburgh, Pa.* —Lights out . . . no high-line power . . . water service stopped . . . gasoline pumped by hand . . . yet the NATURAL-GAS service never faltered for an instant!



THE COOPER-BESSEMER CORPORATION

Mt. Vernon, Ohio — PLANTS — Grove City, Pennsylvania

WHERE · · BUT THE GAS INDUSTRY CARRIED ON!



January Flood, 1937 — *Cincinnati, Ohio* — Semi-martial law . . . business at a standstill . . . street cars stymied . . . pumping plants flooded . . . yet the NATURAL-GAS service kept going full speed!

These 24-year-old Cooper-Bessemers at Branchland, W. Va., push gas through to Cincinnati.

These new Cooper-Bessemers at Haven, Kansas, push gas through to Detroit.

IN March of '36, the angry flood waters swirled through Pittsburgh streets. Yet the NATURAL-GAS service never failed! Ten months later, a mammoth flood struck Cincinnati. Gas history was repeated!

High water holds no terrors for the GAS utilities that depend on slow-speed, long-lived compressor units. History has proved their reliability! Most of the units serving Cincinnati are 1913 Cooper-Bessemers.

The two installations, shown here, are far apart in age, yet they are "brothers under the skin." Although the *modern* units are greatly improved, they are still low-speed and heavy-duty!

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New York City

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Washington, D. C.

640 East 61st Street
Los Angeles, Calif.

201 East 1st Street
Tulsa, Oklahoma

631 Spring Street
Shreveport, La.

Magnolia Building
Dallas, Texas

53 Duncan Street
Gloucester, Mass.

Esperson Building
Houston, Texas

THIRD-GRADE GASOLINE

(Continued from Page 29)

fected through buying the cheaper gasoline. It has to be borne in mind too that even with careful driving the cheap motor fuel oftentimes leaves a greater deposit of gum and carbon to interfere with smooth operation of the car.

General improvement in the country's economic situation is having a pronounced influence in turning the motorist to higher-quality gasoline. To begin with, he is likely to buy a new car, which was not made to run on low-octane fuel. And even if business recovery has not yet carried him to that degree of financial ease which would prompt him to study the 1937 automobile advertisements, he is likely to feel sufficiently affluent to use better gasoline in his old car.

Not only have incentives for buying third-grade gasoline been diminishing, but supplies available for the remaining customers have diminished too. In East Texas, chief point of origin, where huge accumulations of confiscated crude no longer overhang the market, almost every refiner who has survived the revolutionary change in operating and sales methods has installed some form of cracking process and is producing a gasoline of higher octane rating. In North Texas, Oklahoma and Kansas also there has been a gradual decline in the volume of third-grade fuel available because of the installation of cracking units. This has been a consequential factor in bringing normal prices for third-grade material more closely in line with those for the regular. Decline in demand for the low-octane fuel has been accompanied by the strengthening of the general price structure.

Some manufacturers of tractors are now using higher-compression engines, which require a higher-grade gasoline. Virtually all tractor manufacturers are offering high-compression heads. Several have gone into the production and sale of light high-compression tractors designed to operate on regular-grade gasoline.

The Ethyl Gasoline Corp. is starting on the biggest advertising campaign in its history, using national magazines, billboards and other mediums to promote use of premium gasoline. At the same time it is using farm periodicals to advertise the advantages of the regular grade of leaded, or "Q," gasoline. This advertising doubtless will have a marked effect in drawing the gasoline buyer away from low-octane material to the higher brackets.

Consumption of leaded gasoline in 1936 was approximately 13,335,000,000 gallons. This was 1,317,000,000 gallons in excess of 1935 consumption. Sales of premium gasoline in 1936 were 26 per cent higher than in 1935. In comparison with this, the total sales of gasoline rose 10.14 per cent. Of the total volume of leaded gasoline consumed in 1936 in the United States 780,000,000 gallons was of premium grade and 12,555,000,000 gallons was "Q," or regular grade. These figures, while in part indicating merely the advancing total of gasoline consumption, are significant too of the drift toward higher-octane fuels.

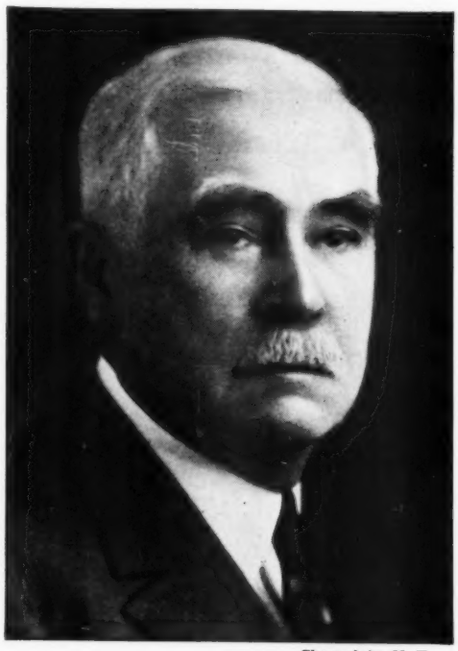
Figures obtained from representative companies operating throughout the Middle West show the average of their sales of third-grade gasoline in proportion to the total in the last four calendar years to have been as follows: 1933, 20.8 per cent; 1934, 18.9 per cent; 1935, 15.3 per cent; 1936, 13.3 per cent. Figures available for the beginning of 1937 disclose continuation of the descending percentage. The same companies show the following average in their sales of regular gasoline: 1933, 74.9 per cent; 1934, 78.8 per cent; 1935, 82.2 per cent; 1936, 83.6 per cent. Percentage of third-grade sales vary widely, but the rate of decline is about the same in all cases. The third-grade sales of one large refinery constituted about 14½ per cent of its total business in 1934 and about 9 per cent in 1936. Another's were about 23½ per cent in 1934 and about 17½ per cent in 1936.

Some parts of the Southwest are likely to offer an outlet for low-octane gasoline for years. Demand for it in most other areas is expected to dry up rapidly. One forecast is that the present middle-bracket fuel, of 63-67 octane rating, will take the place of the present third-grade fuel in large measure. This 63-67 material is bought now in commercial quantities by owners of large automotive fleets. Some market observers say it may come to be used exclusively in this way and thus not appear at the filling stations at all. This would mean a reversion to the two-pump service station, one pump for regular gasoline and one for premium, with the "62 octane and below" discoverable in only the relatively few areas where conditions still made its use possible.

Barring discovery of new pools yielding high-gravity crude, which lends itself easily to skimming operations, many refiners will have to install better facilities for cracking and reforming operations if they are to remain in business, thus further lifting the general octane level of gasoline.

OBITUARIES

J. S. CULLINAN died March 11 in Palo Alto, Calif., from the after-effects of a cold contracted when he jumped from bed during the quake which rocked San Francisco, March 8. When he reached Palo Alto on a visit to Herbert Hoover the cold had developed into pneumonia. Mr. Cullinan was born at Sharon, Pa., December 31, 1860. Both his parents were natives of County Clare, Ireland, and came to America when young and lived in Iowa. After leaving school Mr. Cullinan engaged in the oil business. In 1897 he moved to Corsicana, Tex.,



—Champlain, N. Y.

J. S. CULLINAN

from Pennsylvania, where he had spent 13 years with the Standard Oil Co. He organized the first pipe line and refinery company in Texas, known as J. S. Cullinan & Co., later as Corsicana Refining Co. and finally as the Magnolia Petroleum Co. Severing his connection with the Corsicana enterprises, Mr. Cullinan went to Beaumont in 1902. There, he became the organizer and first president of the Texas Co., from February, 1902, until November, 1913. He then withdrew from the Texas Co. and started the Farmers Production Co. in 1913 which was taken over in 1914 by the American Republics Corp. formed by Mr. Cullinan. To this he added the Petroleum Iron Works, Lima, Ohio, in 1919.

CHARLES A. GEORGE, 69, died at his home in Oilton, Okla., March 4. He was born in Venango County, Pennsylvania, where, in his early boyhood he worked in the oil fields, rising eventually to production superintendent of Forest Oil Co. and also South Penn Oil Co., serving in that capacity nine years prior to his coming to the Mid-Continent to serve as production superintendent of the Prairie Oil & Gas Co. of Kansas with which he remained until 1911. He then went into partnership with Henry Steinberger of Tulsa on a lease north of Okmulgee which he operated until 1917 when, upon selling out, he went to Oilton as production superintendent of Sapulpa Petroleum Co. In 1931 he bought some producing wells near Dewey, Okla., which he operated until his death. He is survived by his widow and one son, Earle, who is also in the oil business at Oklahoma City.

J. G. FARQUHAR, 55, San Antonio, Tex., and Pittsburgh, Pa., oil executive, died of a heart attack at Pittsburgh, Pa., March 11. He was executive vice president of Plymouth Oil Co. and president of Big Lake Oil Co., in addition to other petroleum interests.

GAS RESERVES

(Continued from Page 22)

which blew in out of control, caught fire and wrecked the rig and drilling equipment. Since completion of this well, located in Kern County, section 8-27-23, Standard Oil Co. has finished 7 gas wells, Fullerton Oil Co. 10, Seaboard Oil Corp. 4 and Superior Oil Co. 1. The Ohio Oil Co. has completed five gas wells in the Buena Vista Lake gas field of Kern County up to date. The Delano gas field of Kern County was discovered by Trico Oil & Gas Co. in November, 1934, and up to date Standard has finished six gas wells and Trico Oil & Gas Co. two wells. The Goleta gas field of Santa Barbara County was discovered by General Petroleum Corp. in September, 1929, when No. 1 Moore was brought in flowing 40,000,000 feet of dry natural gas daily from 4,300 feet. Six wells have been completed in this field, General Petroleum Corp. finishing three, Standard Oil Co. two and Shell Oil Co. one. The Dudley Ridge gas field of Kern County has shown some evidence of commercial production of dry gas, but its importance remains to be seen. Wells in that area show a good initial flow but register an abnormally fast decline.

MICHIGAN'S INCREASED RESERVE

Michigan has an estimated gas reserve of over 42,000,000,000 feet. Last year was a banner gas year in that state. Gas wells completed in 1936 and their estimated initial open flow capacity was as follows: Arenac County, 2 wells, 6,108,000 feet; Gratiot County, 31 wells, 251,980,000 feet; Isabella County, 1 well, 1,200,000 feet; Livingston County, 1 well, 450,000 feet (abandoned); Midland County, 996,991 feet, from oil wells; Montcalm County, 101 wells, 2,712,272,000 feet; Muskegon County, 7 wells, 8,606,000 feet; Ogemaw County, 1 well, 3,200,000 feet; total, 3,980,507,000 feet from 144 wells. Mecosta County had 67 completed gas wells during the year, the initial production of which is not given in the record, although it was large. It is estimated that in addition to the 42,000,000,000-foot gas reserve above noted, an additional reserve of 32,000,000,000 feet may be expected from new fields and the exploitation of proved gas fields.

ORISKANY SAND GASSERS

Just about the time eastern gas companies were wondering where their future supply was to come from, gas was discovered in large volume in the Oriskany sand in New York state. The exploration of this sand led into northern Pennsylvania, where in Potter and Tioga counties immense wells were completed. In the past year wildcatting for Oriskany gas has been going on down through the Pennsylvania oil regions and into southeastern Ohio, and on into West Virginia. In the New York and northern Pennsylvania fields alone, 65 wells drilled last year produced initially a total open flow of 730,000,000 feet, ranging from a few hundred thousand to 50,000,000 feet per day in one well in Tioga County. Allegany and Steuben counties are the richest part of the New York state field. In West Virginia 458 gas wells were completed in 1936, many producing from Oriskany sand, which is still receiving much attention from gas companies.

The TH & THD 602 UNIT PUMPERS

■ Self-contained twin crank units for use with concrete bases and separately mounted prime movers retaining the practical design features that have contributed so much to the popularity of National Unit Pumpers.

SPECIFICATIONS

STROKES AT POLISHED ROD
23", 33", 44" and 54".

CONSTRUCTION
All welded construction. Entire unit symmetrical with loads equally divided on shafts and bearings.

BEAM WORKING CENTERS
Well end 10'. Pitman end 9'9".

PITMAN ASSEMBLY
Complete equalization of loads on pitmans, cranks and bearings.

BEARINGS
Fully enclosed oil bath, dust and oil tight. Self aligning double roller bearings on wrist pins.

COUNTERBALANCE
Maximum counterweight effect 11,000 pounds at 54" stroke.

DRIVE
Adapted to all types of prime movers.

REDUCTION GEARS
Spaced herringbone type especially designed for oil field pumping. Single Reduction Gear (34 HP API at 20 spm) and Double Reduction Gear (28 HP API at 20 spm).

N,S CO
REG. U.S. PAT. OFF.

National

THE NATIONAL SUPPLY COMPANY OF DELAWARE

DIVISION OFFICES: PITTSBURGH, PA., FORT WORTH, TEXAS, TULSA, OKLA., TORRANCE, CALIF. · MAIN OFFICE: TOLEDO, OHIO

Natural Gas News

Gas Under Power Commission?

WASHINGTON, D. C.—Federal regulation of the natural gas industry has been recommended by the Interstate Commerce Commission, and Chairman Clarence Lea, of the house interstate commerce committee, plans to press for action on his measure.

The commerce commission, settling a dispute, agreed that the Federal Power Commission should be the regulating agency.

The Lea bill declares transportation and sale of natural gas in interstate commerce is "affected with a public interest," gives the power commission jurisdiction over rates, providing they must be "just and reasonable," and requiring filing of schedules. The power commission also is given power to initiate rate cases on request of states, cities or in its own motion, and power to order extension and improvement facilities.

The bill provides aid for states making interstate compacts to conserve gas and regulates financial dealings of gas companies.

"While this commission has made no thorough investigation of this matter," the report says, "such information as we have in regard to it leads us to believe the regulation proposed is necessary and desirable in the public interest. The bill also appears to be well conceived and drawn."

Gas Conference at Washington

The fourteenth annual distribution conference of the American Gas Association will be held at Wardman Park Hotel, Washington, D. C., April 12 to 14.

The Tuesday program includes the following: Pipe coatings and corrosion committee, C. F. Turner, chairman, East Ohio Gas Co., Cleveland, Ohio; Some Corrosion Notes, Dr. Scott Ewing, research associate, National Bureau of Standards; Theory and Use of Cathodic Protection, A. V. Smith, United Gas Improvement Co., Philadelphia, Pa.; Determination of Leaks in Gas Mains, E. F. Schuldt, Peoples Gas Light & Coke Co., Chicago.

Oklahoma Natural Gas

Statement of Oklahoma Natural Gas Co. and subsidiaries for 12 months ended January 31, 1937, subject to audit and year-end adjustments, shows net income of $1,020,659 after depreciation, interest, federal income taxes, etc., but before surtax on undistributed profits, comparing with $702,076 in 12 months ended January 31, 1936.

Houston Natural Gas Corp.

BALTIMORE, Md.—Report of Houston Natural Gas Corp. and subsidiaries for year ended December 31, 1936, certified by independent auditors, shows net profit of $302,126 after interest, depreciation, amortization, federal income taxes, provision for surtax on undistributed profits, etc., equivalent after dividend requirement on 7 per cent preferred stock, $50 par, to $2.53 a share on 105,526 shares of no-par common stock. This compares with $134,780 or 94 cents a share on 105,556 combined class A and common stock in 1935.

Underground Storage

ARNETT, Kans.—District Judge Hugh Means gave Cities Service Gas Co. power of eminent domain for establishment of an underground gas reservoir under about 4,000 acres of ground near Welda.

Carbon Black Report

The dustless type of carbon black placed on the market a few years ago is meeting with growing demand, particularly in the production of tires. United Carbon Co. has recently installed additional equipment for its manufacture at a number of plants in Texas.

The report of President Nelson stated sales of carbon black by United Carbon during 1936 surpassed the high in 1935 by 13.4 per cent; while inventories were reduced despite increased production resulting from transfer of a number of idle properties in Louisiana to Texas.

United Carbon reports considerable laboratory work to widen the uses of carbon black, conducted at its laboratories in Charleston, W. Va., where another laboratory has been added for study of carbon black utilization for printing inks, lacquers, enamels and paints.

Carbon black deliveries for January and February this year are stated by market factors to have exceeded the same period last year.

Arkansas Proration Bill Dies

LITTLE ROCK, Ark.—Both senate bill 423 and house bill 532, similar proposed acts for new and inclusive oil and gas proration law for the state of Arkansas, died in their respective committees as the fifty-fifth regular session of the Arkansas general assembly adjourned.

Natural Gasoline

New Henderson County Plant

FORT WORTH, Tex.—Construction of the new $100,000 natural gasoline plant in the northern part of the Cayuga field, Henderson County, Texas, is scheduled to start this week and is expected to be completed by the latter part of May. The plant will have a daily capacity of about 10,000 gallons and will be located on production of the Cortex Petroleum Corp. C. A. Middleton and Elliott Middleton are at the head of the company building the plant.

Production Declines in January

The production of natural gasoline showed a material decline in January, 1937, according to a report prepared by the Bureau of Mines. The daily average in January was 5,056,000 gallons, compared with 5,372,000 gallons in December and 4,949,000 gallons in January, 1936. The most notable changes from December were in the Panhandle field and Louisiana where the daily averages declined 70,000 and 77,000 gallons, respectively. Other decreases were noted throughout all the major districts of Oklahoma and West Central Texas.

Production of the various districts, in gallons, was as follows: Applachian, 7,054,000; Illinois, Michigan, Kentucky, 1,006,000; Oklahoma, 35,833,000; Kansas, 4,684,000; Texas, 43,054,000; Louisiana 7,512,000; Arkansas, 888,000; Rocky Mountain, 5,523,000; California, 51,190,000.

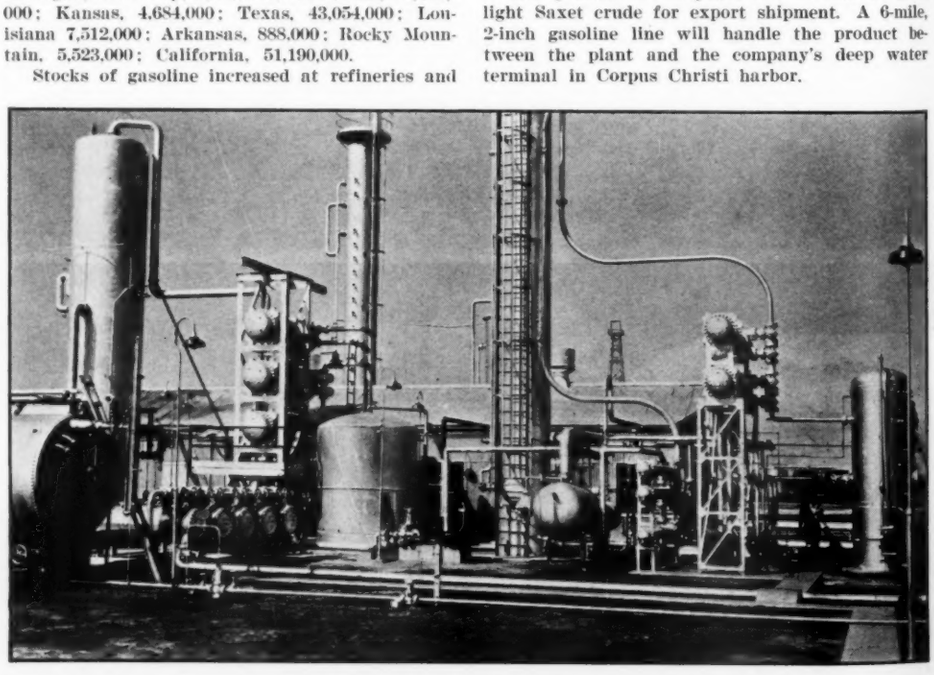
Stocks of gasoline increased at refineries and decreased at plants and terminals, the net decrease being 966,000 gallons. Stocks at plants and terminals decreased from 68,628,000 to 62,706,000 gallons at the end of January while stocks at refineries increased from 101,682,000 gallons at the first of the month to 106,638,000 gallons at the end of the month.

Shipments of natural gasoline to jobbers and exports totaled 21,995,000 gallons or slightly less than in December. The average vapor pressures for all movements except exports increased in January compared with December. The weighted average for all shipments rose from 21.34 in December to 21.41 in January.

Saxet Plant Operating

HOUSTON, Tex.—The new natural gasoline plant of the Southern Minerals Corp. began operation last week in the Saxet field of Nueces County, South Texas. Beginning operations with an average daily take of 20,000,000 feet of gas, the plant is expected to produce 10,000 gallons of stabilized natural per day. The gas utilized in the new plant is from Saxet producing wells of the deep Frio sand. Connections to all such production will be completed shortly, and plans are being considered for the utilization of the lean gas in the manufacture of carbon black.

The product of the plant will be blended with light Saxet crude for export shipment. A 6-mile, 2-inch gasoline line will handle the product between the plant and the company's deep water terminal in Corpus Christi harbor.



High-pressure absorber and stabilizer unit at Shell Oil Co.'s gasoline plant in the Ten Section field of California

Refinery Expansion

Elected Vice President

E. E. Swope, who a little over a year ago was appointed general manager of refineries for the

E. E. SWOPE

Magnolia Petroleum Co., with headquarters at Beaumont, Tex., has been elected vice president and manager of refineries and a director of the Magnolia Petroleum Co. and Magnolia Pipe Line Co.

Receiving Bids for New Units

OIL CITY, Pa.—Bids are now being received for a $500,000 expansion program at the Foster Brook, Pa., refinery of the Bradford Oil Refining Co., according to an announcement by H. C. Salisbury, plant superintendent. The program of new construction includes a new filter plant, cracking unit and extension to the power plant. The company recently issued a $300,000 bond issue to provide funds for the construction.

Building Iso-Octane Plant

NEW YORK.—Basic patents for production of iso-octane gasoline have been extended by the Hydro Engineering & Chemical Co. to Gulf Oil Corp., and the licensee is now engaged in construction of a plant at Port Arthur, Tex., to use the process. By application of heat and pressure to di-isobutylene (iso-octene) and by adding hydrogen, the iso-octane gasoline of 100 knock rating is produced.

The Lummus Co., New York, has been retained to design and construct the iso-octane plant at Port Arthur, which will be the first licensed under patents owned by the Hydro Engineering & Chemical Co., a division of the Standard Oil Development Co.

Denver Refinery to Enlarge

CHICAGO.—Bay Petroleum Corp. is planning to install in its Denver refinery the first Dubbs cracking unit built in Colorado. M. H. Robineau, president, has signed a license agreement with Universal Oil Products Co., and construction is to start at once.

The unit, of the multiple coil, selective cracking type, will have a charging capacity of 900 bbls. a day. A topping unit, to be built at the same time, will have a capacity of 1,650 bbls. a day. The plant will run on mixed Wyoming crudes from the production of Ohio Oil Co. The new plant will produce 68-70 octane gasoline, kerosene, tractor distillate, cracked fuel oil and perhaps road oil.

Pure Adding to Toledo Plant

NEW YORK.—A high pressure, combination topping and cracking unit for Pure Oil Co. is under construction at Heath, Ohio, the latest development in that company's broad expansion and modernization program. The new combination unit will have capacity of approximately 8,000 bbls. of Mid-Continent crude per day. The plant probably will be completed and on stream by October, according to the projected working schedule.

The new Heath plant is being designed and constructed by the Lummus Co. of New York, which was recently awarded contract for similar construction at Toledo to augment a combination unit built there for Pure in 1936. The new high pressure, combination topping and cracking unit at Toledo has a rated capacity of 5,000 bbls. In addition, the Lummus Co. has been awarded contract for a new cracking unit complete with towers and other equipment to handle the products from 5,000 bbls. of crude to be processed through a tube still already at the Toledo plant.

Circulation was started last week through Pure Oil Co.'s new combination plant at Smith's Bluff, Tex., which was a construction project carried over from the latter part of 1936.

Pipe Line Activity

Old Ocean Gas Line

The Old Ocean Gas Co. of Houston, Tex., has let contract to Williams Brothers Corp., Tulsa, to lay 12¾ miles of 6⅝-inch 19-pound pipe line between two points in Brazoria County. Work on this line is to start as soon as the pipe is on the ground.

Kansas Pipe Line

An amendment filed with the Securities and Exchange Commission by Kansas Pipe Line & Gas Co. states that the offering price on the 5 per cent first mortgage bonds, Series A, will be par. The company registered $1,000,000 of the bonds, of which $200,000 have been underwritten as follows: Harold E. Wood & Co. and Dietz, Chamberlain & Co., $75,000 each, and Bigelow, Webb & Co., $50,000. The balance of the bonds have been optioned to the same underwriters in the same proportion to September 1, 1937. The prospectus was dated March 15.

Reclamation Work

Oklahoma Pipe Line Co. is taking up 31.41 miles of 8-inch pipe to be reconditioned at Boswell, Choctaw County. The work is part of the reclamation work that has been under way for sometime on the old line running eastward from Healdton, Okla., and this particular section to be next removed runs east from the Bokchito pump station in Bryan County to the 8- to 10-inch junction in Choctaw County. All of this work is being done by Oklahoma Pipe Line Co. except hauling which has been contracted to C. Hobson Dunn, hauling contractor of Dallas, Tex.

Missouri-Kansas Directors

WILMINGTON, Del.—Election of three directors of Missouri-Kansas Pipe Line Co. was delayed in Chancery Court until litigation involving stock in the company is settled. Four directors, whom common stockholders are entitled to select, were elected without contest before Albert L. Massey, master. The other three directors represent Class B stockholders. Formal election was deferred until a final hearing before the chancellor on two suits filed last week to have a voting trust agreement voided and two trustees removed and enjoined from voting.

The directors chosen were William G. Maguire, A. Faison Dixon, W. H. Vermilye and Leo M. Blancke, all of New York.

Skelly Kansas Line

Skelly Oil Co. has announced beginning of work on a pipe line that is a small project in itself but will greatly increase the capacity of its Kansas lines. The new project is a 6-inch line, 5 miles long, representing a cross-over between two main lines. It will run from section 10-23-5w to section 3-24-5w, in Reno County. It will connect two parallel lines, one running to the northwest from the Hutchinson area to the Hauschild, Lyons, Silica and other districts, and the other running southwest to the Lerado and Cunningham pools. The connection will increase the capacity of the two main lines by about 5,000 bbls. daily, providing improved service for the Hauschild, Saxman, Silica and other pools in Rice and Barton counties.

Moore Pool Outlet

Oklahoma Pipe Line Co. has awarded contract to Williams Brothers Corp., Tulsa, to take up and recondition 7.63 miles of 6-inch double pipe line between Kinta and Blue Mountain Junction stations in Haskell County, Oklahoma. This pipe is being reconditioned at the Kinta pump station and 10½ miles of this pipe will be relaid between the Moore oil field, Cleveland County, and the Oklahoma City pump station of the Oklahoma Pipe Line Co. This new line will provide outlet for oil produced by Carter Oil Co. in the Moore pool.

Gas Line to Palestine

PALESTINE, Tex.—Utilities Natural Gas Co., a subsidiary of American Liberty Oil Co., has proposed to construct a 10-mile pipe line from the Long Lake pool to furnish gas for local consumption at a lower rate. The city now gets its gas supply from the United Gas system, having a pipe line running from the Waskom field, near the Texas-Louisiana line.

Representatives of Utilities Natural Gas were tentatively granted a 25-year franchise to furnish the city's gas from several wells in the Long Lake field.

Continental 37-Mile Line

Continental Oil Co. has let a contract for laying 37 miles of 8-inch new pipe line westward from the end of its system now terminating in the Geneseo, Kans., oil field. This new line will extend the Continental Oil Co. pipe line system into a territory where there are several oil fields which can furnish added connections. The contract for this work was awarded Osage Construction Co., A. M. Harroll, president, Tulsa, and the pipe will be oxyacetylene welded by the lindeweld method.

The Kansas senate ways and means committee recommended passage of a bill establishing a department of petroleum engineering and a petroleum research station at the University of Kansas.

Oil News from Foreign Lands

Venezuela Drilling Program

The anticipated increase in Venezuela petroleum activity in 1937 is rapidly taking more definite form. Companies interested in the Lake Maracaibo Basin district are proceeding with their accelerated drilling programs in proven areas carried over from 1936, and in addition, step-out locations are either now being drilled or locations prepared for actual operations in the western part of the country as well as in the intensely active eastern section.

Furthermore, companies are proceeding with efforts to obtain additional exploration and exploitation concessions in various parts of Venezuela where government controlled lands are still available. Awaiting formal approval and announcement by government officials is another extensive concession involving approximately 1,600,000 acres, scattered in various states. In negotiating for the new concession, the company assumed obligation to construct additional refining capacity in Venezuela, a demand which is growing to be uniform on the part of the government. On two previous occasions, the Lopez Contrares administration has made demands that a refinery be constructed on national soil as a requirement in granting concessions. In addition to the refinery construction requirement, the concessionaire has agreed to pay more than $2,000,000 to the government in the form of advance taxes.

Colon Development Co., reorganized last year, is preparing to resume drilling activity in the western part of Venezuela. The company has at least three exploratory holes on the 1937 program. Probably the first to be started will be the test in the Rosario district west of the north end of Lake Maracaibo. The company drilled one hole to approximately 5,000 feet in that general vicinity several years ago, but geological information gained from it and from subsequent core drilling indicated that it was off structure. Roads and other preliminaries to drilling are currently engaging the Colon personnel, but actual drilling will follow as soon as possible.

Another of the Colon's projected tests for 1937 is within 6 or 7 kilometers of the Colombian border between Lake Maracaibo-La Tarra production and the Socony-Vacuum and Texas Corp.'s La Petrolea dome on the sound end of the Barco concession. This projected test is designed to explore for Cretaceous production on extensive Colon holdings in that territory so far undrilled. It is anticipated that zones producing on the Barco concession will be found considerably deeper at the tentative location picked out for the Colon test across the border in western Venezuela.

The third major test definitely on the Colon program is on the La Tarra structure where a deep hole is to be drilled in the proven shallow producing area in an effort to obtain Cretaceous production.

Information is not sufficient to indicate how deep it will be necessary to drill at La Tarra to reach Cretaceous beds producing at La Petrolea, but some guesses are 7,000 feet or more.

In the eastern part of Venezuela, Standard Oil Co. of Venezuela has started two more wildcat tests. The company's No. 1 Yabo, about 5 kilometers west of Tembledor, in the state of Monagas, is drilling at about 1,362 feet. North of the Quiriquire field in the state of Sucre, Standard of Venezuela has started drilling operations on No. 3 San Juan and the test is now progressing below 1,820 feet.

Standard of Venezuela No. 2 El Salto, in the southern part of Monagas between the Rio Tigre and Rio Morichal Large, on Pantepec acreage, has been suspended at 5,200 feet and the hole is plugged back to 4,445 feet where it is standing idle.

South of Quiriquire, Standard of Venezuela No. 3 Maturin, south of the original Maturin test which blew-out, ignited and cratered at a shallow depth, is proceeding at 4,775 feet without important developments reported. In southeastern Monagas, Standard of Venezuela No. 1 Tabasco is drilling at 4,950 feet.

Venezuela's crude oil production in February returned to near normal levels following the recent low mark to which it dropped in January as a result of the labor strike in Lake Maracaibo fields. Production of 11,818,626 bbls. was reported for February, 1937, a daily average of 422,100 bbls., which is some short of the output a year ago. Failure of production to equal or exceed February, 1936, output probably is due to tardiness in resuming full capacity operations.

VENEZUELA CRUDE PRODUCTION

	February, 1937	February, 1936	Daily av. Feb., 1937
By fields—			
Lagunillas	6,613,357	7,039,666	236,197
La Rosa-Ambrosia	1,717,042	1,978,733	61,232
Mene Grande	856,200	960,915	30,579
El Mene	62,356	60,254	2,227
Tarra	229,500	413,443	8,196
La Paz	7,700	13,566	275
Concepcion	74,600	99,209	2,664
Cumarebo	194,848	210,771	6,959
Quiriquire	2,009,360	1,729,235	71,763
Federnales	53,663	.....	1,917
Total	11,818,626	12,505,792	422,100
By companies—			
Lago Pet. Co.	4,145,232	4,136,887	148,045
Venezuela Oil Con.	2,655,700	3,225,809	94,847
Standard of Ve'suela*	2,644,929	2,311,330	94,463
Caribbean Pet. Co.	856,200	960,915	30,579
Colon Oil Corp.	229,500	413,443	8,198
Mene Grande†	1,176,000	1,355,000	42,000
British Controlled	62,356	60,254	2,228
North Ven. Pet. Co.	48,709	42,154	1,740
Total	11,818,626	12,505,792	422,100

*Includes Creole's share in La Rosa and Lagunillas.
†Formerly Venezuela Gulf Oil Co.

European Imports Increase

European petroleum imports in 1936 reached an all-time peak of more than 200,000,000 bbls., with practically all countries contributing to the increase. The exceptions were Spain, Italy and Sweden. The combined imports of 13 of the more important European consuming countries rose to 28,530,000 tons, compared to 25,477,000 tons the preceding year. About 31 per cent of the increase went to Belgium; Finland's imports increased 21 per cent; Netherlands' requirements rose 13 per cent and Germany's imports 11.5 per cent. Great Britain's imports of petroleum increased only 4.7 per cent in 1937 to a peak of 11,122,100 tons, that country continued to lead all Europe. France was the second largest importer receiving 7,266,500 tons last year while Germany consumed 4,203,100 tons.

Amiranian Concession Approved

Formal approval has been extended by the Iran parliament to the bill granting Amiranian Oil Co. a large oil concession in the northern part of that country. The Amiranian Oil Co., affiliated with Seaboard Oil Co. of Delaware and other individual private interests, obligates itself to start geophysical, geological or other research work within six months after date of ratification. The company is also obligated to start actual drilling within 18 months after ratification.

Will Drill in Sweden

Drilling operations in the southern part of Sweden in search for oil and/or salt are to be launched in the near future, it is reported from London. Dr. Gavelin, chairman of the Swedish Geological Institute is making arrangements for necessary equipment from offices in Copenhagen.

Shell in Colombia

Royal Dutch-Shell interests are launched on a program of broad expansion in Colombia, it was announced at Amsterdam. The company has been engaged in investigation of wildcat prospects in Colombia for several years. It is believed recent changes in Colombian laws removing some of the red tape in acquiring clear title to land was instrumental in expanding Royal Dutch-Shell's interest.

Refinery of Berry Wiggin & Co., Ltd., at Weaste, Manchester, England

ASK THE CEMENTERS

ON SOUTHERN MINERALS BLISS No. 6

ON Southern Minerals' Bliss No. 6, Clarkwood, Texas—oil string, 4800 ft. of 7" casing, 9⅝" hole—the Superintendent ran slurries up to 15.4 lbs. 'Incor' gave him exactly what he needed—for 'Incor' pumps readily at 15 or 16 lbs., assuring a stronger, denser, longer-life shut-off.

Even at 16 lbs., 'Incor' is free-flowing, velvet-smooth—and it stays gel-like to keep out mud. For 'Incor' is specially made to do just that.

And controlled setting time, built into the cement itself, allows plenty of leeway when delays occur while running cement into place. Dependable high early strength permits drilling out in 1 to 2 days.

Two Oil-Well Cements

'Starcor,' too, has these needed special properties, only it is 'timed' for use in deep, hot holes. And 'Starcor' is also specially processed for use where sulphate waters tend to destroy the action of ordinary cement.

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*Reg. U. S. Pat. Off.

TWO PORTLAND CEMENTS—BOTH MADE FOR OIL WELLS

Properties	'Incor'	'Starcor'
Greater pumpability	Free pumping at 15 to 16 lbs.	
Gel-like body	Reduces mud contamination; doesn't settle out	
Controlled setting time	Normal UNDER 140°	Normal OVER 140°
High early strength	Drill out 1 to 2 days	Drill out 2 to 3 days
Sulphate-water resistance	Good	Exceptional sulphate resistance

LONE STAR CEMENT CORPORATION

the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

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New Markets for Gas

The great expansion of interstate natural gas lines to populous centers remote from the producing fields reached its peak in the late twenties. The depression broke upon the country before there was time to reap the benefits of that expansion, reducing industrial demand and checking the growth of other consumption. The abrupt decline in marketed production from its peak in 1930 was turned only in 1934, rebounding to a new record in 1936.

It is now apparent this expansion cannot be continued without enlargement of existing pipe line systems and distributing facilities. Any survey of possible outlets will show the vast potential market. Four states, California, Texas, Oklahoma and Louisiana, are producing more than 75 per cent of the natural gas output and are consuming more than 50 per cent of it, indicating outside markets have hardly been touched.

Reports from representative areas show there is need for more natural gas for practically all classes of consumers. Domestic users, who are in position to pay more for their fuel than any other class, now account for less than 20 per cent of the total marketed production. Industrial consumers generally prefer natural gas to any other fuel providing that it can be made available at a price reasonably competitive with other fuels.

Approximately two trillion, two hundred billion feet of natural gas was marketed last year, supplying only a fraction of the possible market if natural gas was made available to potential consuming centers.

On the producing side the need of additional outlets is already evident. The intensive search for oil reserves has made known great gas reserves that are more impressive than the additions to the oil reserves. Gas structures have been outlined which can be tapped whenever there is justification from the standpoint of markets for doing so. Another angle is that, with the large gas reserves in some of the new oil fields, state regulatory bodies have taken action that will not permit production of the oil until a market has been found for the gas.

More markets and more production calls for more pipe lines, increasing capacity of existing systems and construction of new lines.

If these facts were understood by those in public office they should be more ready to encourage the necessary expansion of the natural gas distribution industry than to obstruct it by unwise and unwarranted legislation.

All the year round

MANY a skimming plant lived in an oxygen tent through the winter and furnace oil business was the oxygen that kept it alive

A skimming plant can make good furnace oil but it can't make good gasoline—not good enough

That's too bad—the furnace oil season is over now—the gasoline season is here

It's a Dubbscracked gasoline season

Dubbscracking makes gasoline that motorists want—and buy—makes it from any crude or any other charging stock, and at lowest cost—royalty and all

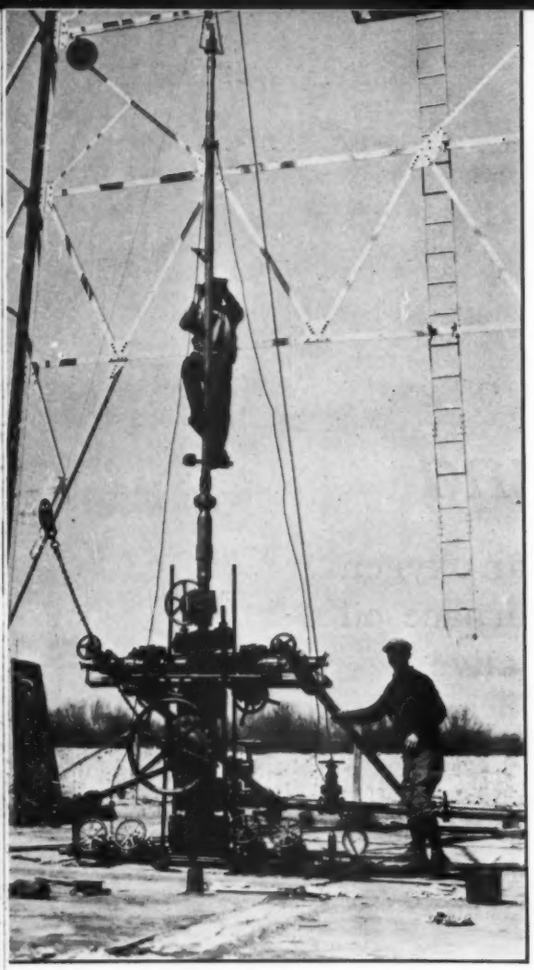
And in gasoline off-seasons when furnace oil is at a premium, you can run your Dubbscracking unit to make less gasoline and more furnace oil

All the year round Dubbscracking pays

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

Ten Section Pool Result of Order



Taking a bottom-hole pressure on a Shell well in the Ten Section pool

Probably the most outstanding recent discovery in California was the Ten Section pool in the San Joaquin Valley southwest of Bakersfield. This discovery led to the locating of many wildcat tests in the San Joaquin Valley, and this in turn led to a second great discovery, the Greeley pool, which lies north of the Ten Section pool. In hope of making further discoveries in this area, or of extending the known productive areas of these pools, more wildcats have been started. The drilling in progress is making use of the most up-to-date practices and equipment, for the reservoirs have been found at depths of 7,000 and 8,000 feet, and wildcat wells are equipped to drill to 10,000 feet, or even deeper, if commercial production is not found at a shallower depth.

The development of both of the new pools will be characterized by orderliness and lack of waste, since the productive acreage of each pool is apparently held by a single company. The Ten Section pool was so named by Shell Oil Co. because its discovery was made practically in the center of a solid block of land covering an area of 10 square miles which had previously been enclosed with one fence by the Kern County Land Co. Likewise, the acreage expected to comprise the productive area of the Greeley pool is all under lease by the discovering company, Standard Oil Co. of California. As yet little is known of the Greeley field, but at Ten Section three producers have been completed, one having produced for eighth months, and three dry holes have been drilled just outside of the Shell block, so that some of the general conditions are known.

Seismograph reflection shooting was partly responsible for the discovery of Ten Section field. It is located on the floor of the valley where surface geological indications are scarce and of little value. The structure is an elongated dome with its axis in a northwest-southeast direction. The dip of the strata on the flanks of the structure is much more gentle than is typical of California structures, such as Kettleman Hills and the Ventura field. The earlier discoveries were practically all characterized by sharp anticlines closely related in origin to the mountain ranges. Most of these structures were quite obvious at the surface, which accounted for their early discovery. Probably it is to be expected that oil-bearing structures discovered on the floor of the valley, where the influence of mountain-making movements has not been so great, will be less intensely folded. Since the Greeley discovery is 7 miles directly north of the Ten Section discovery, it is believed to be on a related parallel fold.

Ten Section production is obtained from a Miocene sand referred to as the Stevens, but its correlation is unknown. The discovery well struck this sand at 7,832 feet and penetrated a thickness of 56 feet. The highest well structurally so far completed cored almost continuous oil sand from 7,796 feet to slightly below 8,400 feet. Drilling was continued to 8,984 feet, but below 8,425 feet only small streaks of oil sand were found interbedded in gray sand, which carries water. The oil had evidently been trapped by shale or limestone lenses, or in some other manner. This well was plugged back to 8,385 feet to shut off the bottom water. It is not known whether a horizontal water table exists under the oil reservoir, or whether the water level is at a different height in the different sections of the reservoir due to shale.

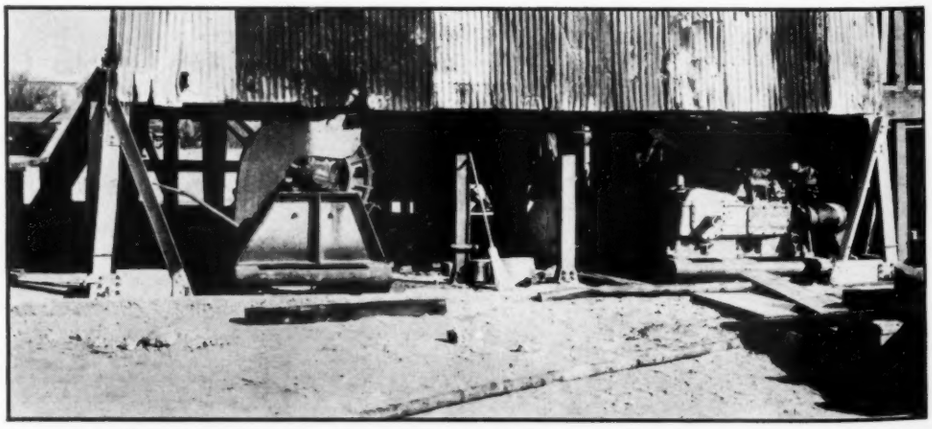
Laying crude oil pipe line to serve new production in the California pool

DISCOVERY WELL

A gas cap is present in the upper zone from which the discovery well produces. The oil from this zone is lighter than that produced from lower levels, which may be due to accompanying gas production from the gas cap, or to the reservoir being divided by shale streaks. Both of the last two wells drilled were completed with the upper gaseous zone cased off.

The casing program calls for setting about 40 feet of 20-inch conductor, then about 1,025 feet of welded inserted slip-joint seamless 13⅜-inch casing for the surface string. The primary shut-off is made just above the top of the sand body as required by California law, using about 7,800 feet of 9⅝-inch seamless casing. This water shut-off must be tested. From this point on, the program has not been standardized, and Shell's future plans for completion of their wells are uncertain. The discovery well was completed with a perforated 4¾-inch steel liner below the 7-inch seamless-casing seat. In completing the second well in the field a string of 6⅝-inch casing was cemented below the seat of the 9⅝-inch casing in order to case off the upper gaseous zone of the reservoir. This was cemented to a point above the 9⅝-inch casing seat to protect the 9⅝-inch casing against high pressures. A 4¾-inch perforated steel liner was used below the 6⅝-inch casing seat. On the third well a 7-inch combination string with the lower joints perforated was run to the total depth. Then using a baffle inside of the string, just below the top perforations, cement was forced down the casing through the perforations and up around the outside of the string to a point above the 9⅝-inch casing seat.

In this operation the drilling-mud in the hole and a canvas basket which is located outside the casing just below the perforations through which the cement flows, prevent the cement from going downward. After the cement had set the baffle and the cement remaining on top of it were drilled out. Thus, the lower perforated section of the string of casing, which lies opposite the less gaseous oil sand deep in the reservoir, was opened. It is likely that this procedure will be adopted



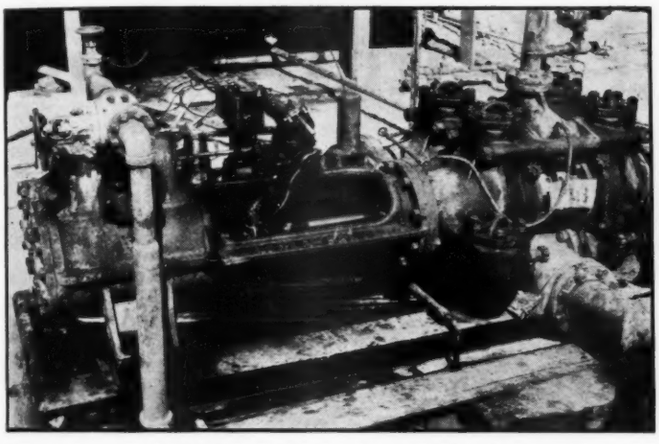
Drilling rig in the Ten Section field showing individual rotary-table engine and standby hoist installed under the derrick floor

# of California Featured as ly Development

By T. P. SANDERS

for future completions, since its use has been successful elsewhere. It is believed that the combination cementing will be used as long as the tested shut-off above the sand is required by the state.

Before bringing in the wells they are tubed to the top of the perforations, and high-pressure christmas-trees with adjustable flow-beans are installed. The bottom-hole pressure is 3,175 pounds, and casing-head pressures as high as 2,250 pounds have been recorded, so all surface flowing equipment must be capable of standing extremely high pressure in anticipation of heavy duties.



Fluid-piston slush-pumps in use in the field

DOES OWN DRILLING

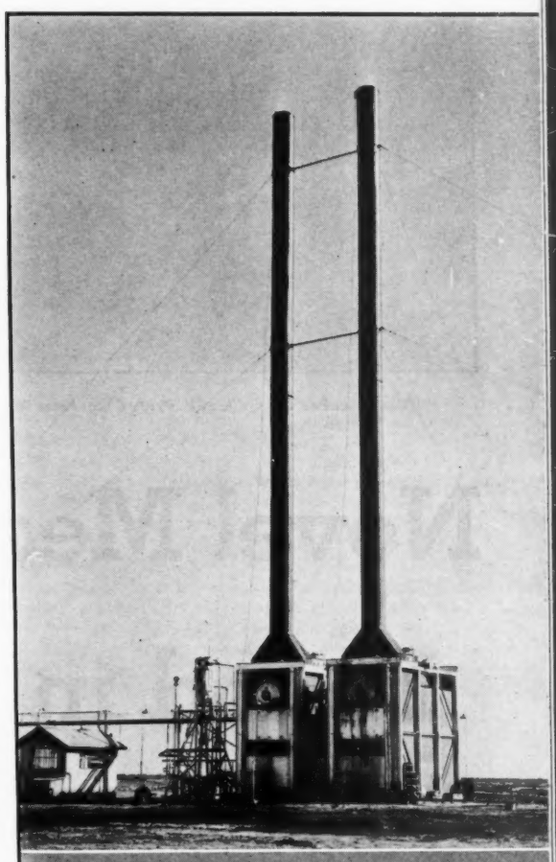
The Shell Co. which does its own drilling, has two rigs in use in the Ten Section field. The drilling equipment on one rig is worthy of note, since it applies the use of a small twin cylinder engine for rotating and as a stand-by in a manner that has not previously been employed. The equipment consists of the convention type of drawworks and large twin-cylinder engine for operating the drawworks. But this large engine does not drive the rotary-table. It is driven by a smaller twin-cylinder engine which is installed under the derrick floor. A chain drive is used, the chain passing vertically up through the floor to the rotary-table, so that practically no room is taken up on the derrick floor other than that which is required by the rotary-table itself. The standby hoist is also mounted under the derrick floor on this rig, and is driven by chain from the small steam engine when its use is required. The dead line of the drilling-cable passes through the floor and is wound on the drum of the standby hoist. There is also a chain drive from the small engine to the drawworks.

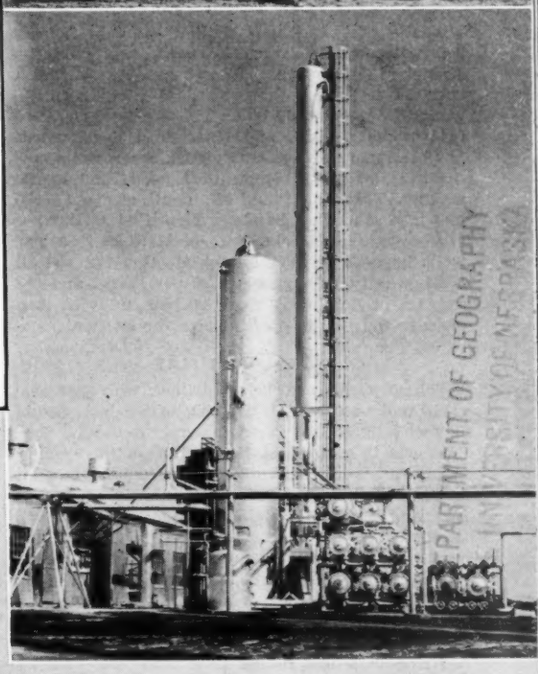
It is unlikely that the standby hoist will ever be required for pulling the drill-pipe, because this feature makes it possible to operate the drawworks with the small engine in case the large engine should fail in service. The chief advantage of the individual rotary-table engine set under the derrick floor is that there is more room on the floor, and the floor is not crossed by a chain guard. Setting the standby hoist under the floor represents a saving in construction costs and equipment costs, since this unit is usually set on a special platform adjoining the derrick floor and is provided with an individual engine for operating it. There is also a saving in wear on the drawworks since it is idle while the bit is on bottom. Other new equipment used in the Ten Section field includes two fluid-piston slush-pumps.

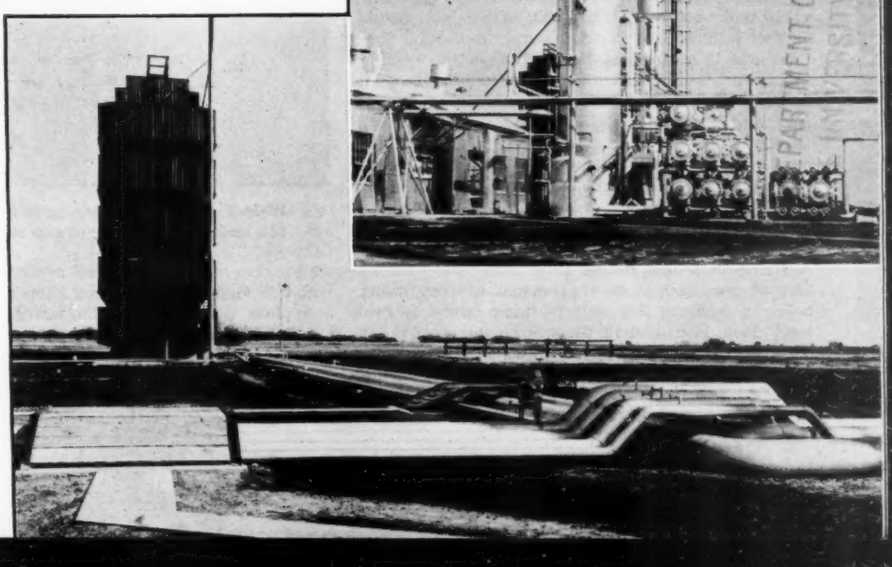
Development plans call for a well to 20 acres in the Ten Section field. In January two wells were producing with a combined potential of about 4,500 bbls. per day. The average daily production during that month was 1,015 bbls. With this oil, over 13,000,000 feet of gas was produced per day, most of which came from the discovery well because of its high gas-oil ratio. The gas was stripped of its gasoline vapor by the absorption plant which was constructed in the field shortly after the discovery was made. Of the remaining dry gas, 1,800,000 feet per day were used for drilling and absorption plant operations, while the remainder, except for a small loss, was sold to public utility companies for domestic and industrial use.

The value of gas in California is an important factor in the economics of drilling and producing deep wells. Revenue from gas sale makes it possible for 7,000-foot California wells to show figures for per-barrel lifting costs comparable to similar operations in the East Texas field.

Bottom-hole pressure tests in the Ten Section wells have shown a very inconsiderable decline to date. With so little information available, estimates of recoverable oil must necessarily make use of many assumptions and the actual performance of these wells will have to be judged after longer time has elapsed.







The high-pressure absorption unit used in the company's Ten Section pool gasoline plant is shown in the upper picture. The middle picture is a close view of the absorbers and exchangers in this plant and below are gas and oil lines near the plant which have been laid above ground to avoid soil corrosion

DEPARTMENT OF GEOGRAPHY UNIVERSITY OF NEBRASKA

Equipment on the Galbraith, Byers & Co. lease in the Airport pool in Tulsa County showing (on left) V-8 Ford motor used to provide power for pumping and servicing wells, (right) winch and geared pumping power

Novel Mechanical Features Are Found in New Tulsa Oil Pool

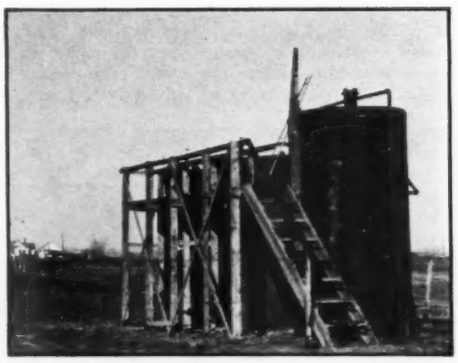
By L. G. E. BIGNELL

A new shallow sand oil field is being developed about 1½ miles south of the Municipal Airport on the northeast edge of Tulsa with 14 wells completed to date ranging in capacity from 4 to 140 bbls. This field was opened in November, 1936, and since then development has been more or less active with seven wells now drilling and the prospects of a good field in the making. This oil is found at a depth of about 1,075 feet in a sand, that has been identified as Bartlesville, varying in thickness from 11 to 18 feet. The wells have to be shot into production but the oil is 41 gravity and brings $1.30 per barrel and the average production is about 20 bbls. daily so they promise to be quite profitable to the owners.

POOR MAN'S PLAY

These wells are being drilled with portable cable tool outfits with a string of 8¼-inch casing 40 feet long set for surface string in 10-inch hole. The hole is reduced at the bottom of the surface string to 8¼-inch and drilled to a depth of about 1,060 feet where the hole is again reduced to 6⅝-inch and drilled through the sand. After drilling through the sand it is shot and then the 6⅝-inch casing is run using a bottom-hole nipple to set the pipe. As soon as the hole is cleaned after the shot oil will fill it to the surface if allowed to stand long enough. There is not much gas accompanying the oil and it is necessary to pump the well. A string of 2-inch tubing is usually run with 20 feet of gas anchor on the bottom of the tubing below a common 1¾-inch working barrel 5 feet long. Hole is drilled in the gas anchor at a point corresponding to the top of the sand.

On the Galbraith, Byers & Co.'s K. W. O. community block two wells have been completed, the first good for about 20 bbls. of oil per day and the other, a northwest edge well good for about 2 bbls. Cash M. Young is in charge of this lease and has installed a rather novel power. This power is set in a galvanized building between the two wells and rod lines, each about 130 feet long lead to pump jacks at each well. These jacks run at seventeen 15-inch strokes per minute during daylight only. The oil is delivered to a central battery of tight welded tanks. The small capacity



Welded steel tank battery made from 55,000-bbl. tankage used in new Tulsa shallow field

well makes a little water and separation of oil and water is made in a high gun barrel provided with a syphon which drains the water from beneath the body of oil. The tanks are connected to the Sinclair Prairie Pipe Line Co. lines.

The pumping unit is powered by a Model V-8 Ford engine which is started and run with gasoline until the oil in the hole is pumped down so the natural gas can enter the well. The engine is then run on this natural gas. The speed of this engine is 1,500 r.p.m. and it develops 42 horsepower. The cooling system consists of a tractor type radiator.

To reduce the speed from 1,500 r.p.m. to the 17 strokes per minute at the pump jacks Mr. Young has used a winch between engine and pinion shaft on the geared power. There is a 9.4-inch diameter grooved pulley on the engine shaft with V-belts driving a 36-inch grooved pulley on a winch jack shaft. The jack shaft on the winch runs at 392 r.p.m and there is a second 9.4-inch diameter grooved pulley on the winch shaft driving V-belts to a 40-inch flat face steel pulley on the geared power. In the power the gear reduction is 5½ to 1 giving the 17 strokes per minute to the rod lines running to the pump jacks at the wells.

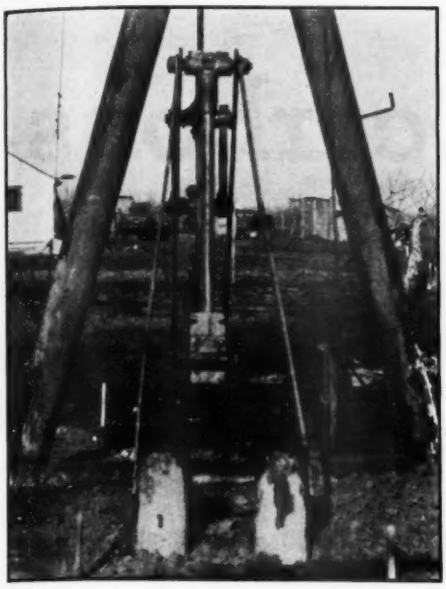
To keep tension in the V-belts between engine and winch, and between winch and geared power, the engine and winch are each mounted upon sliding bases.

MASTS FROM DRILL PIPE

Another novel feature on this lease is the 35-foot high 6-inch seamless rotary drill-pipe masts erected over each well. These masts are in line with the drum on the winch in the power house and windows have been provided in each end of the power house so that the operator can see each mast. From the winch a steel line runs to either mast and over a snatch block anchored at the base of the mast and then up through a sheave set in the upright of the mast and then down to the traveling block. To pull rods and tubing it is only necessary for the operator to handle the winch in power house as directed by the man at the well. The V-8 engine provides ample power for handling

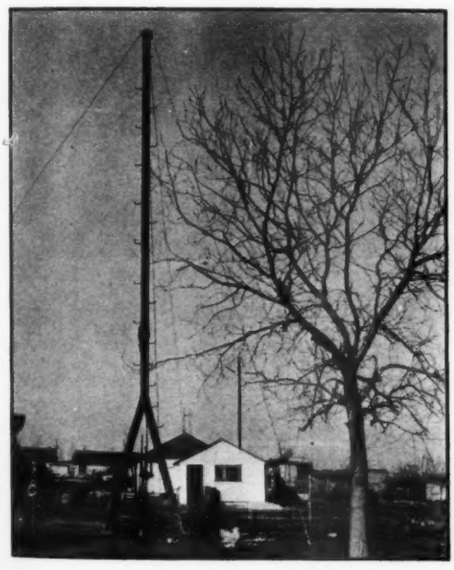
rods and tubing because when this work is being done the wells are shut down.

The rod lines to the pump jacks at the wells were laid out to run in a straight line but it was found the rod line to the east well interfered with



Pump jack anchored to two pipe-posts buried in concrete

the base of the engine and to overcome this the takeoff from the geared power was shifted so that the line led out of the side of the power house. To change the direction of this rod line a swing was made by anchoring a length of rod line at a point north of the power house and then tying this to links connecting the two members of the



Stationary 35-foot steel mast over well in Airport field. Power house between two of Galbraith, Byers & Co. wells indicated by 35-foot steel masts

rod line. For hook-on a short section of 8-inch pipe is buried in the ground and slotted so the rod line can be guided through the slots and carried on the pull rod block set inside the 8-inch pipe. To hook on or off the usual spacer is used against this buried 8-inch pipe.

This field has started an active lease play along the east side of Tulsa from Turley to Bixby and indications now point to many tests being drilled in this area. The shallow depth permits the use of portable drilling machine outfits and the wells will not cost very much to complete.

Lubricants Symposium Featured by A.S.T.M.

A number of well-attended meetings of various subgroups of A.S.T.M. committee D-2 on petroleum products and lubricants were held at the recent A.S.T.M. committee week in Chicago. These groups reported the results of their work to the main D-2 meeting, and the symposium on lubricants, which was a technical feature of the society's regional meeting, was developed by technical committee B on motor oils.

The four technical papers comprising the symposium on lubricants were as follows: "Engine Deposits—Causes and Effects," by W. A. Gruse and C. J. Livingstone, Mellon Institute of Industrial Research; "Automotive Bearings—Effect of Design and Composition on Lubricants," by Arthur F. Underwood, General Motors Corp.; "Addition Agents for Motor Oils," by G. M. Maverick and R. G. Sloane, Standard Oil Co. of New Jersey, and "How to Select a Motor Oil from the Standpoint of the Consumer," by W. S. James, chief engineer, Studebaker Corp.

In their paper on "Engine Deposits—Causes and Effects" Messrs. Gruse and Livingstone discussed five general locations where collection of foreign material in engines may be expected, namely, combustion chamber, valves, under piston surfaces, piston rings and crankcase. In considering combustion chamber deposits, the authors indicated that while carbon deposition does not seem to constitute a bottle neck in further engine progress the reduction of such deposits by all means available will be of real assistance. They pointed out that there apparently was no common cause for any one type of ring-fouling failure for all classes of engines. It appears that there is a type of ring clogging attributable to low-temperature duty and another arising in high temperature. The latter is complicated by differences in oils and in engines and the problem remains a puzzling one.

In his interesting paper on automotive bearings, Mr. Underwood pointed out that while a great deal of research work had been done on bearing design and lubrication, these were still largely matters of experience. Equipment for testing lubricated bearing was described and some of the important design factors of lubricated bearings were described in detail. The paper considered the subject of lubrication primarily from the standpoint of bearing performance and the author pointed out "that within somewhat wide limits the properties of the oil, other than viscosity, have little or nothing to do with bearing performance. However, in an internal combustion engine, there are many other areas to be lubricated and the lubricant, in addition, must perform other functions. These other factors may require certain properties in lubricants, even though they may not be required by the bearings. Consequently, the problem of quality of oil is of very great importance and it is still necessary to use oil of proper quality for actual use in automobile engines."

Messrs. Maverick and Sloane in their paper traced developments as indicated by patents and outlined the purpose and commercial success of the agents and at the same time warned of complications which may be involved in their use. It was pointed out that the oil industry has improved the quality of lubricants to perhaps as great an extent as it has improved fuel. This has been achieved largely as an outcome of improvements in refining methods, but the best that can be expected from refining methods is limited by the nature of the oil itself. They indicated that the crankcase oil of the future should be made with precision and that lubricants can be made more economically and also of higher quality by the use of petroleum bases carefully refined to assure cleanliness and freedom from impurities and protected by the addition of necessary modifiers.

The more important conclusions to be drawn from papers presented in the symposium, and also papers presented in the symposium on motor lubricants held in 1933 were outlined by Mr. James in his paper on selection of motor oils. It was pointed out that motor oil performance cannot be predicted without knowledge of engine characteristics and that oil viscosity at the operating temperature is the most significant property of engine lubricants. Through lack of full understanding of the problem, the rate of oil replenishment appears to be the item of most interest to the driving public.

There was spirited discussion on a number of points at the meeting of the subcommittee on viscosity. This group recommended that a revision of the kinematic-Saybolt viscosity conversion table, published in 1936, be approved as a standard method. In its 1936 report, the committee included as information proposed methods of test for kinematic viscosity by means of the suspended level and modified Ostwald viscosimeters. By action of committee D-2, these proposed methods are to be consolidated into a single document and it is planned to submit this to the society for approval as a new tentative test method. Based on a study of more accurate data which has become available, minor revisions in the present viscosity-temperature chart (D-341—32 T) are in prospect.

In their group meeting the subcommittee on natural gasoline effected a reconciliation of the two current vapor pressure (Reid) methods (D 323—32 T and D 417—35 T) and presented a consolidated method, which will be submitted to the society as a proposed new tentative standard. this group.

Experts from all parts of the United States were present to consider national standards for testing gaseous fuels as they affect the purchase and sale of such products to consumers. These standards are now being prepared under the supervision of A.S.T.M. committee D-3. The main committee is headed by Dr. A. C. Fieldner of the Bureau of Mines. R. B. Harper, vice president of the Peoples Gas Light & Coke Co. of Chicago, is vice chairman of this group, and R. M. Conner, director, American Gas Association, testing laboratories, is secretary. Actual details connected with the preparation of such standards are being carried out by subcommittees.

One of the groups is engaged in the preparation of standard methods for a determination of heating value of gases and definitions to be employed therewith. A thorough study of existing methods for such determination is being carefully made.

A second subcommittee is giving full consideration to existing methods and apparatus now employed for the determination of specific gravity and density of gaseous fuels. The objective of this group is to select some existing and entirely satisfactory procedures for determining such information. It is entirely probable that this committee may find it necessary to develop new methods, or what is more probable, modify existing ones.

A third group has already made a very extensive study of methods now employed for determining small quantities of water vapor in fuel gases. A fourth subcommittee is confining its activity at the present time to a broad study of the subject of chemical analysis. Tentative tolerances have already been accepted and a study of the different methods and apparatus employed for such work is well under way.

According to the instructions laid down by the main committee supervising the foregoing activities each interested subcommittee is expected to limit the scope of its activities to commercially available fuel gases combustible in air.

Physical Characteristics of Multi-Ring Hydrocarbons

By W. L. NELSON

More and more data of fundamental nature is entering into the design and operation of refineries. While we are not certain that all of the hydrocarbons here given, and those discussed in other articles of this series, are found in petroleum, nevertheless, the assembled knowledge of the higher boiling hydrocarbons is scant, and any guides by which the hydrocarbons in petroleum can be compared or catalogued are of great value. Our best judgment lends us to believe that such oils are composed of highly condensed polycyclic hydrocarbons of the general nature of the complicated naphthalene, anthracene, and naphthene hydrocarbons described in these articles. The enormous number of hydrocarbons that are possible in combination hydrocarbons which are part paraffin, part olefin, part cyclic, etc., is almost beyond imagination. Properties of other benzene derivatives were published in the February 4 and 18 issues of The Oil and Gas Journal.

The specific gravity data were converted to 60° F. referred to water at 60° F. except for data that was given at relatively high temperatures.

REFERENCES

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20. "Handbook of Chemistry and Physics," Chemical Rubber Pub. Co., Cleveland, Ohio.
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22. Rossini, F. D.—"Chemical Constitution of Lubricating Oils," Ref. & Nat. Gasol. Mfr., 14, 268, June, 1935.

NAPHTHALENE AND ANTHRACENE DERIVATIVES

Hydrocarbon—	Formula	Structure	Molecular weight	Sp. gr. 60/60	Boiling point °F.	Melting point °F.	Heat of combustion B.t.u./lb.	Saybolt viscosity 100° F.	Saybolt viscosity 210° F.	Viscosity index
Naphthalene	$C_{10}H_8$		128.06	1.148[21]	424.2[20]	176.4[20]	17,150[3]	.....	.....	...
B Methyl naphthalene	$C_{11}H_{10}$		142.08	1.034[20]	473[20]	95.2[20]	.....	.....	.....	...
B Hexyl naphthalene	$C_{16}H_{20}$		218.2	.964[21]	.....	.....	.....	42.6[21]	33.2[21]	—66[21]
1-4 Diisobutyl naphthalene	$C_{18}H_{24}$		240.2	.936[22]	.....	.....	.....	74.5[22]	34.4[22]	—284[21]
2-3 Dihexyl naphthalene	$C_{22}H_{32}$		296.3	.....	.....	.....	.....	97[21]	38.7[21]	53[21]
Trihexyl naphthalene	$C_{28}H_{44}$		380.4	.917[21]	.....	.....	.....	159[21]	43.8[21]	98[21]
Trihexyl naphthalene	$C_{28}H_{44}$		380.4	.914[21]	.....	.....	.....	203.5[21]	46.7[21]	99[21]
B Octadecyl naphthalene	$C_{28}H_{44}$		380.4	.912[21]	.....	123.8[21]	.....	113.5[21]	42.8[21]	140[21]
B Duocosayl naphthalene	$C_{32}H_{52}$		436.4	.905[21]	.....	139.6[21]	.....	168[21]	47.6[21]	144[21]
5-B Naphthil duocosane	$C_{32}H_{52}$		436.4	.904[21]	.....	.....	.....	169[21]	46.1[21]	122[21]
1-B Naphthil 2-isobutyl eicosane	$C_{34}H_{56}$		464.5	.907[21]	.....	.....	.....	190[21]	48.4[21]	129[21]
5-B Naphthil duocosene-5	$C_{32}H_{50}$		434.3	.915[21]	.....	.....	.....	152.4[21]	44.5[21]	116[21]
5-B Naphthil hexacosane	$C_{36}H_{60}$		492.5	.885[21]	.....	102.2[21]	.....	193[21]	48.4[21]	131[21]
3-B Naphthil 4-n butyl duocosane	$C_{36}H_{60}$		492.5	.895[21]	.....	.....	.....	300[21]	53[21]	102[21]
5-B Naphthil hexacosene-5	$C_{36}H_{58}$		490.5	.889[21]	.....	.....	.....	178[21]	47.6[21]	135[21]
3-B Naphthil 4-n butyl duocosene-3	$C_{36}H_{58}$		490.5	.902[21]	.....	.....	.....	271[21]	51.9[21]	109[21]
5-B Naphthil 6-n butyl tetracosene-5	$C_{38}H_{62}$		518.5	.895[21]	.....	.....	.....	291[21]	53.5[21]	117[21]
5-B Naphthil 6-n-butyl tetracosane	$C_{38}H_{64}$		520.5	.898[21]	.....	.....	.....	323[21]	54.8[21]	107[21]
Anthracene	$C_{14}H_{10}$		178.08	1.27[20]	669.2[20]	71.1[20]	17,050[3]	.....	.....	...
Dihydro di-Bactyl anthracene	$C_{30}H_{44}$		404.4	.951[22]	.....	.....	.....	1,390[22]	73.4[22]	—9
Phenanthrene	$C_{14}H_{10}$		178.08	1.030[20]	644.4[20]	212[20]	17,030[3]	.....	.....	...

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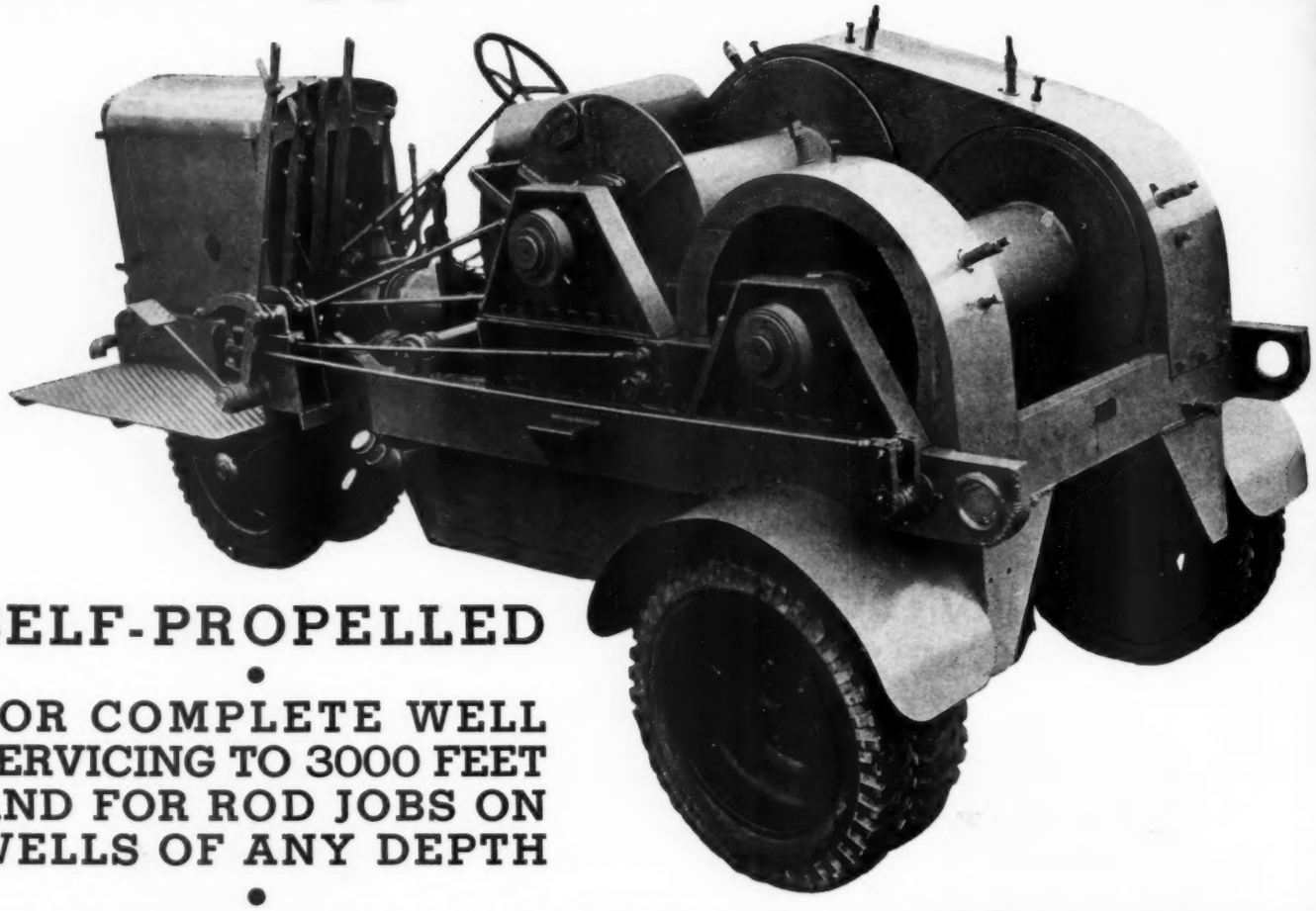

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There is a HOPPER PORTABLE HOIST for every need

Cementing truck and crew cementing an oil string in the Rodessa field.—(Le Daux)

Selective Well-Completioning Work Is Increasing in Texas

By MITCHELL TUCKER

Selective well-completing is now being practiced on an enlarging scale in the Talco, East Texas and Rodessa fields with marked success. Although conditions in these fields vary widely, justification is found in each for this rather recently developed manner of completing wells in proven fields.

The selective method of completing wells differs from the usual practice of setting casing above the oil sand before drilling in. In the more recent method, the entire zone or zones of saturation are cored, drilled and carefully logged, and often the hole is carried to the base of the section, after which casing is set on or near bottom and cemented. The pipe is then gun-perforated opposite the desired points for selective completing to accomplish the desired results.

BENEFITS OBTAINED

To provide an idea of the many benefits which are being obtained from this practice, in the East Texas field it is expected that ultimate recovery will be increased; in the Talco field water production is being reduced with resulting saving in treating costs; and in the Rodessa field gas-oil ratios are being materially reduced, allowables increased, and wells are completed in conformation with state regulations. Because of the widely varying conditions and results from each of these three fields, the application of the selective well-completing method will be discussed separately for each area.

For many years in the East Texas field it was the practice to set casing in or near top of the Austin chalk and then just "scratch" the sand body sufficiently to assure a good well. Even with very small penetration, water has been found to eventually break in. Long experience with drilling deeper, plugging back and performing other reconditioning work in the Woodbine sand body has shown that in certain portions of the field it is not as uniform as originally thought, and is not the true sand first claimed. Estimates now place the Woodbine body as about 40 per cent sand. It is not improbable that the shale or red bed streaks in this body provide complete separation between upper and lower parts of the sand over rather wide areas, each possibly having a different water level. Close study has indicated that what was formerly supposed to be a uniform water table is now in places very irregular. Therefore, these facts have indicated that better wells, freer from water, and with possibly increased ultimate recovery, can be obtained if the variable sand body is thoroughly studied before selecting point of completion.

In the former method of setting pipe above the sand the operator never knew just what he had in the full sand body until probably the exposed portion was depleted or drowned out, and it became necessary to cement off, drill deeper or do exploratory work of one type or another. Whereas, here he sees the entire picture during original drilling of the hole, then selects the most advantageous point from which to produce first. Also, a very accurate well record is available for reconditioning in later field life if needed.

These facts have caused several major operators in the East Texas field to pioneer the selective manner of well-completing by drilling several experimental wells, completely through the Woodbine, and then make Schlumberger hole surveys to afford definite information regarding position of shale streaks, impervious sections of red beds, point or points of oil-water contact, etc. After having this information, productive levels of nearby wells can be studied and together with data obtained from electrical survey, the casing which is cemented on bottom can be perforated opposite the points where it is desired to first take production.

After completion of these first tests the practice is being extended on "inside" locations by drilling only to the lower water table at about 3,320 feet, then surveying hole, setting casing near bottom and perforating at the most advantageous point. After depletion of this section other sections which have been carefully logged can be opened for production. Should water break in at points of perforation, a squeeze job can be made through the perforation and either shut off that section entirely, or permit perforating again slightly higher so that pipe line oil may again be produced.

In certain portions of the field, mostly in the south end where the impervious streaks are more pronounced, this new method of completing may prompt the drilling of additional wells and increase ultimate recovery. If test wells indicate an attractive portion of clean saturated sand below levels of present wells, drilling of new wells may be found more satisfactory than attempting to deepen and run short strings in old ones.

TALCO FIELD

In the Talco field the same manner of well-completing is used for an entirely different purpose. This sand body of Paluxy age has been referred to at times as being "unstabilized"; that is, there is not a complete separation of oil and water in the section. Throughout about 250 feet in the Paluxy, porous and saturated zones occur in varying proportions, each apparently separate from the others and usually each carrying a separate water level.

Figure No. 1 shows a typical electrical survey of the Paluxy body at Talco. It will be noted that at least five distinct and separate points of porosity and saturation are logged, and experience has shown that water is present, presumably in a bottom-hole form, in the base of all these parts. The accepted manner of selectively completing such wells is to perforate high in one or all of the zones of saturation, thereby shutting off water which otherwise would be produced through an open hole, and permit production of clean oil through the entire unstabilized body. This log was taken from a townsite well which was completed in this manner, and it is one of the very few wells in the territory which is not making water after several months' production.

The production of clean oil at Talco is especially desirable in view of the very tight emulsions

which form in the crude after aging, and the expensive and difficult process required to successfully treat it.

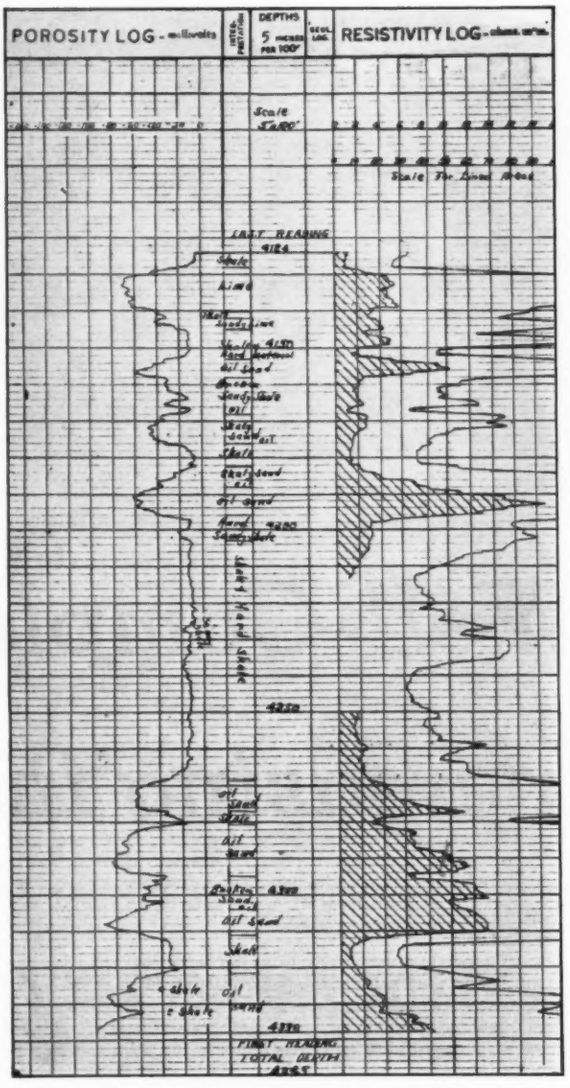
RODESSA FIELD

This same form of completing in the multiple zones at Rodessa offers many advantages from other angles. In the first place, it is the most satisfactory manner of completing wells in accordance with state regulations that no two sands may be interconnected in any one well.

In any such a section as the Lower Glen Rose, where four distinct gas and oil zones are prominent, work-over and reconditioning jobs are numerous in later stages of production. In anticipating such work, a very accurate log is a first essential, and it is also highly desirable that the hole be retained in a mechanical condition which will facilitate this sort of work. Obviously, the practice of setting casing through the entire well-logged section seems the best method of leaving hole in good mechanical condition for future workovers. It is the opinion of some that possibly the present gas horizon may eventually produce oil after the gas cap is further depleted, and additional perforating will permit production from this zone at the time desired. The electrical survey having indicated previously the points of greatest porosity, a guide is provided to the most probable points of saturation.

It is the growing practice in the Rodessa field to make both vertical and horizontal permeability tests on the section, all of which are plotted in a composite log record for present and future reference in selective work.

Also, such manners of completing are very effective in reducing gas-oil ratios, and in as much as a limiting gas factor is placed upon the present manner of allocating Rodessa production (The Oil and Gas Journal, Jan. 18, 1937, page 27), this is an all-important fact which may permit increasing well's daily allowable, and allow a more equal withdrawal with adjacent properties where wells are completed with lower ratios. This type of selective perforating at time of completion has proved a very effective manner of reducing gas-oil ratio in the high ratio areas. In fact, those early completions which are now being reconditioned to meet state requirements that two sands must not interconnect, are setting short strings of casing and selectively completing.


POROSITY LOG - millivolts
DEPTHS
5 inches per 100'
RESISTIVITY LOG - ohms, m²m/m
Scale 5"=100'
LAST READING
9126
Shale
Lime
Shale
Oil Sand
Shale
Oil Sand
Shale
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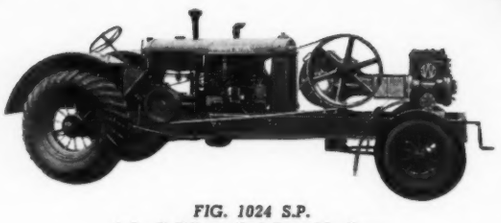


FIG. 1024 S.P.
4x6—Self-Propelled Portable Pump
FIG. 1036 S.P.
6x6—Self-Propelled Portable Pump

NEW!

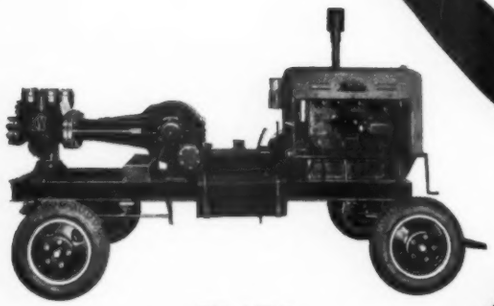


FIG. 1450-T
5x10—Portable Pump Mounted on Trailer
Pressures up to 800 lbs.

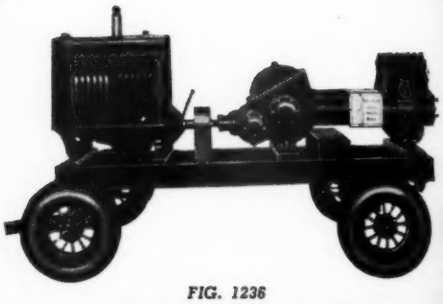


FIG. 1236
6x6—Portable Pump Mounted on Trailer
Pressures up to 750 lbs.

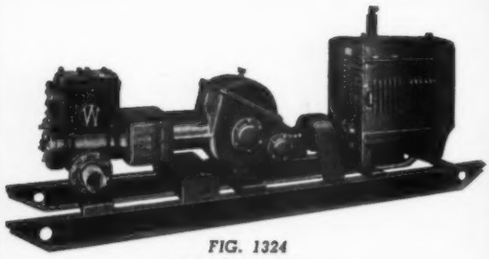


FIG. 1324
4x6—Direct Drive
Pressures up to 750 lbs.

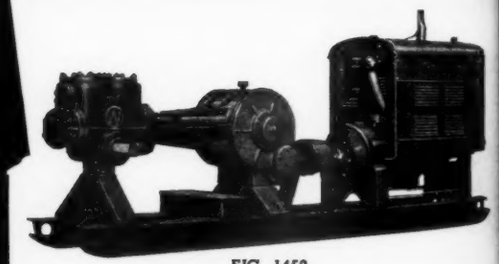


FIG. 1450
5x10—Direct Drive
Pressures up to 800 lbs.

WHEATLE

...It's Really Good Judgment

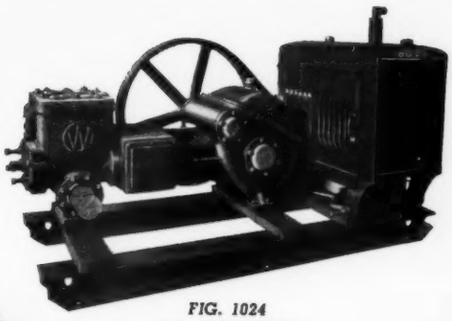


FIG. 1024
4x6—V-Belt Drive
Pressures up to 750 lbs.

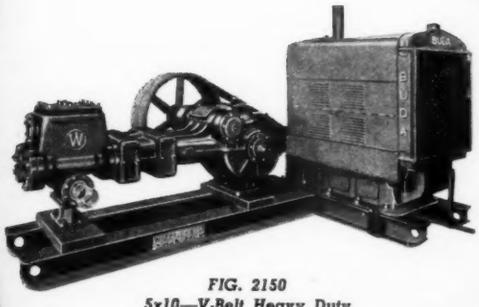


FIG. 2150
5x10—V-Belt Heavy Duty
Pressures up to 1400 lbs.

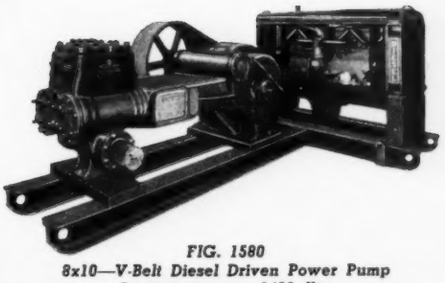


FIG. 1580
8x10—V-Belt Diesel Driven Power Pump
Pressures up to 1400 lbs.

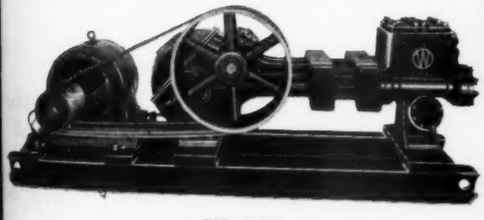


FIG. 2170
7x10—Electric Motor Drive
Pressures up to 1400 lbs.

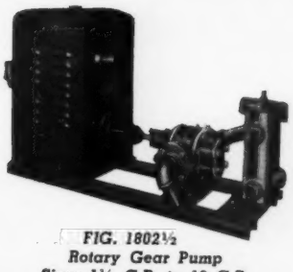


FIG. 1802½
Rotary Gear Pump
Sizes 1½ G.R. to 12 G.R.

...EY PUMPS

(Continued from Page 50)

low as 4 tons per well, though part of this economy is the result of using Martin County clay, which is superior to the native clay formerly used in drilling the surface.

Some operators start drilling the salt zone with the same mud used above the salt, and add no mud. The fluid soon becomes colored brine as the mud settles out and salt is dissolved from the walls. Other operators clean out their slush pits and start with fresh water at the top of the salt. Some dissolve about 8 tons of salt in the fresh water by using a hopper in which a stream of fresh water is mixed with crushed rock salt. Sometimes pulverized salt is dumped into fresh water in the pits and stirred up with steam jets. While 8 tons appears to be a considerable quantity of salt, it should be pointed out that about 60 tons would be required to saturate the water contained in the common-sized pits.

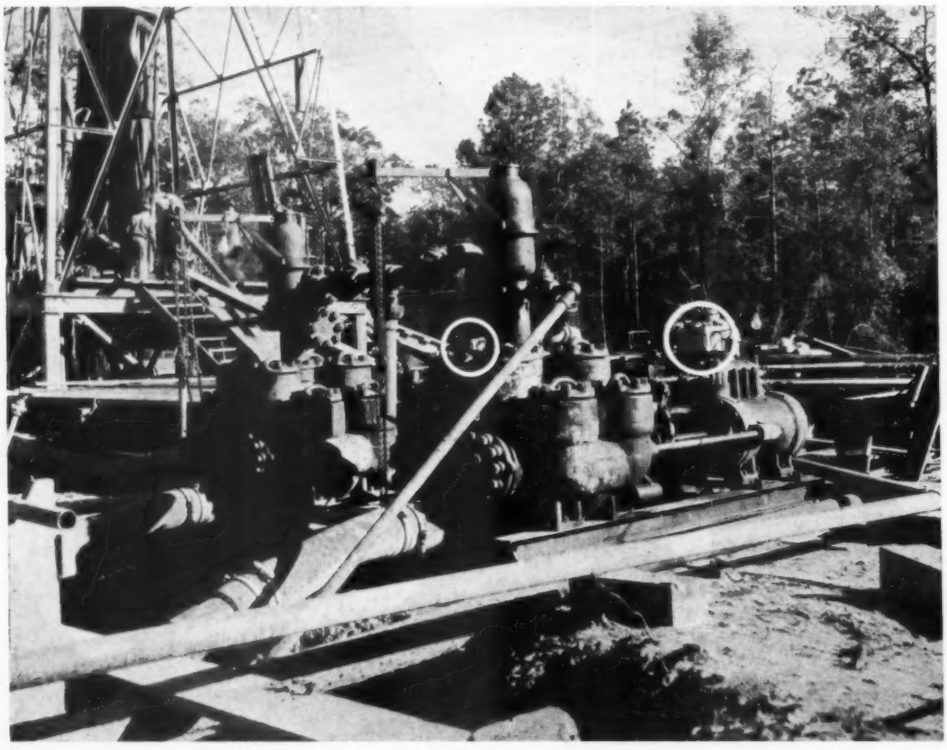
The purpose of adding salt at the surface is not so much to give weight to the column in case of encountering a high-pressure gas stratum or air pocket as it is to reduce the quantity of salt dissolved from the walls of the hole. When 60 tons of salt are taken into solution from the walls of the hole, by the drilling fluid, the bore-hole becomes greatly enlarged in diameter. It has been the case in the past that most twist-offs have occurred in the salt zone. The large hole probably gives the drill-pipe a lashing action which causes the failure and aggravates the fishing job. One company reports a noticeable decrease in fishing jobs since inaugurating the practice of adding salt at the surface. They expected also to find that the cement would come up to a higher level behind the flow string of casing when the same quantity of cement was used. To date they have been unable to find any difference, although they have run temperature surveys in the wells while the cement was setting.

Adding salt at the surface makes it possible to obtain a better sample record, than if the salt is dissolved in the hole. Salt water, does not carry the cuttings to the surface as readily as viscous mud. The velocity of the fluid returning to the surface is reduced when the solution of salt enlarges the hole. Greater slippage results, and the samples are more contaminated by cuttings from upper formations. The best samples are obtained in this territory by setting casing below the salt, and then using a 15 to 18 second mud, but this increases the cost of the well $8,000.

In completing wells in this area many operators set the casing, usually 7-inch, at the top of the oil saturated zone so that the gas streaks above are all cased off. Others set the casing higher and depend on the use of liners, or packers run on a string of tubing to retain the gas. One company has greatly reduced the investment per well by using a 5½-inch flow string, 7⅝-inch intermediate string, and 9⅝-inch surface string.

Brine weighing as much as 12½ pounds per gallon was used in one well at Jal, though in this case it was used for the purpose of killing a well that had blown out. The effectiveness of the brine was well illustrated near Eunice. A gas horizon was struck while carrying fresh water which blew out with such force that the slips were blown out and the fourble-board was knocked out of the derrick. After six hours the gas was gauged at 38,000,000 feet. Later another well was drilled 1,300 feet away, where the same conditions existed. Eleven-pound brine was used which kept the gas from blowing out. This was a sweet-gas zone, which is often found between the salt zone and the pay. The gas occurring immediately above the pay is a sour gas. The drilling of these deep gas horizons does not present a difficult problem, because the depth makes them easier to control with heavy fluid. If casing is set through the salt, the same brine is used in drilling below the casing point, but mud is mixed with it. Constant "gunning" of the pits is required to keep the mud from settling out.

Blowouts most frequently are caused in this area by air pockets occurring in the salt zone, which is usually about 800 feet thick. The gas in these pockets will not burn, and is thought to be carbon dioxide and nitrogen. The volume is usually very small, but the pressure is great for the depth at which they occur; often as much as 2,000 pounds for depths between 1,400 and 2,500 feet. If the volume is not too great, pressure is released by the gas bubbling up through the salt water. Large volumes result in a blowout. Probably 90 per cent of the air pockets do not cause blowouts, and when blowouts do occur they are seldom very serious, since only the drilling fluid is blown from the hole. The pocket is depleted of gas in a few minutes so that the hole can be again loaded and drilling continued. In territory such as the Gulf Coast the case would be different since blowouts there cause caving and stuck drill-pipe. Caving is quite unusual in West Texas and New Mexico. A few very serious blowouts have been caused by air pockets, notably in Andrews County, Texas, where the average pressure of these pockets is greater than in New Mexico. Drill-pipe has been blown from the hole and derricks wrecked.



5158 Feet in 5½ Days

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Here's the 4-Feed Model "STANDARD." They're made in 1- to 10-Feed sizes for every oil country lubrication requirement.

"STANDARD" LUBRICATORS

Efficiency of Motor Lubricants Determined by X-Ray Method

Successful application of an X-ray method in testing motor lubricants for their efficiency in protecting metals from injurious surface wear has been announced by the Continental Oil Co. The new tests, which are attracting wide attention among lubrication experts, were devised by Dr. George L. Clark, foremost authority on X-ray diffraction, in collaboration with his University of Illinois colleague, Robert R. Sterrett, and Bert H. Lincoln, Conoco scientists.

Differing radically from any previous test of lubrication efficiency, the process provides that metal first be subjected to a powerful X-ray beam. Much as sunlight is diffracted by a pane of glass, the beam is diffracted by the metal and a picture taken of the pattern created by the diffraction. Then the metal is lubricated and run under a constant load for a given time, following which the metal is again subjected to the X-ray beam. Differences in the pictures of the diffraction pattern taken before and after the metal has been

worked reveal the efficiency of the lubricant, since they reveal the degree of change which has taken place within the internal structure of the metal. Obviously the lubricant which permits the least such change is the most efficient lubricant.

In the past scientists, seeking to classify lubricants as to efficiency, have tested the oil for its chemical nature, viscosity, color and similar qualities. However, many authorities today hold the opinion that modern engines operating under terrific load and stress have rendered all such tests obsolete; and that the contemporary scientist can hope accurately to determine the degree of protection from wear which a lubricant affords only by tests of the metal before and after it has been worked with the lubricant in question.

Photo-Electric Cells Used for Taking Texas Traffic Census

The state highway commission of Texas is taking a traffic census of all vehicles using its highways, marking the trend of traffic on its highways over a year's period. To expedite the counting of automobiles automatic electric instruments such as shown in the accompanying photograph, are used. Intelligent enough to know an automobile from a bicycle, and a pedestrian from a trailer, these instruments record only the passing trucks, automobiles and accompanying trailers.

The instruments are set up, one on each side of the road and facing each other, and are connected to an electric high-line for electricity to operate them. Beams are thrown across the highway by them, unobserved by traffic even at night because red filters allow only the infra-red light

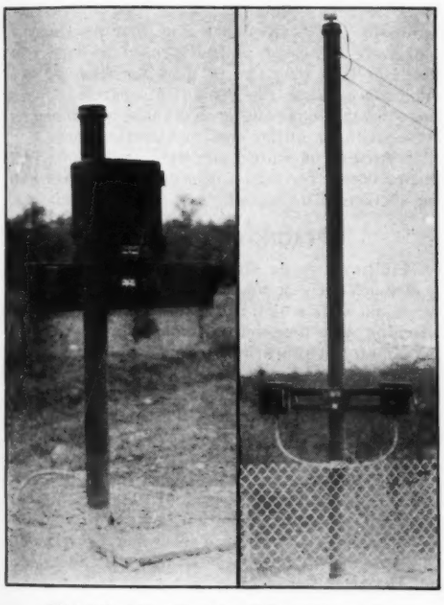

Photo-electric cells for taking car census

to be reflected. In each instrument there are two glass prisms (eyes) which point across the road at the others. Through these "eyes," beams of light are thrown across the highway into the other "eyes," which reflect the beams back upon a photo-electric tube. Each ray energizes a solenoid which holds a plunger in position against a spring.

When the beam is broken the solenoid is de-energized, the spring trips, the plunger jumps and another vehicle is recorded like another mile on a speedometer. A synchronous motor in the instrument operates a clock operating another small motor which releases a hammer every hour, thereby stamping the hour and total number of vehicles on a ribbon like that of an adding machine. Thus the busiest hour of the day for the highway is found.

Every week the tabulator ribbon is taken out, notes made of the tabulations, and the ribbon sent to headquarters at Austin. When the East Texas oil field was at its "boom" peak, the 17 miles of highway between Longview and Gladewater, was found to be the busiest in the state, these instruments being used to check the traffic.

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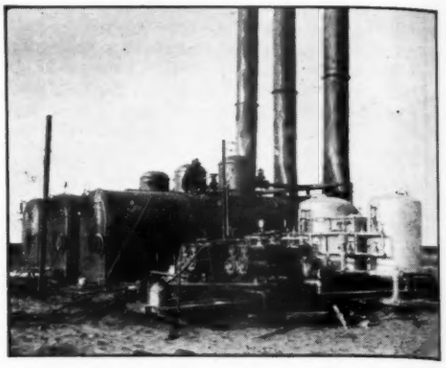
Portable Zeolite Water Softeners Aid in Reducing Scale



Three-boiler drilling set-up and zeolite treaters

By T. P. SANDERS

In several areas in the Mid-Continent field where active development is in progress the use of portable water softeners on steam drilling rigs is being rapidly accepted by operators interested in prolonging the lives of their boilers. This is especially true of drilling operations in New Mexico and West Texas, where water available for drilling purposes is inclined to be exceptionally hard. The same conditions are often found in Kansas fields, and in other areas. The zeolite process of water softening is meeting with favor in all of these fields. This process of softening has been in use for industrial and domestic purposes for many years. However, the recent introduction of vitrified green sand, which is a processed natural zeolite, has brought about the present widespread use of the process, since a bed of green sand can be used both for softening and for filtering the water. Thus, water carrying silt or other suspended material can be charged into the softener without preliminary filtering. The suspended material is retained on top of the green-sand bed so that it can be washed away by a reversal in the direction of flow through the bed.

Zeolite, as used in the water softening process, is a complex base-exchange silicate, which has the property of taking up calcium and magnesium ions and giving off an equivalent of sodium ions, up to a definite capacity limit. When water is passed through a bed of zeolite, sodium replaces the calcium and magnesium; elements which make the water hard and form scales in the boiler. A given volume of zeolite will treat a definite quantity of water, depending on the hardness of the water and the type of zeolite used. Green-sand zeolite has a lower treating capacity than synthetic zeolite. When the action of the zeolite ceases, it can be regenerated by washing with a relatively small quantity of sodium chloride (salt) solution.

PORTABLE EQUIPMENT USED

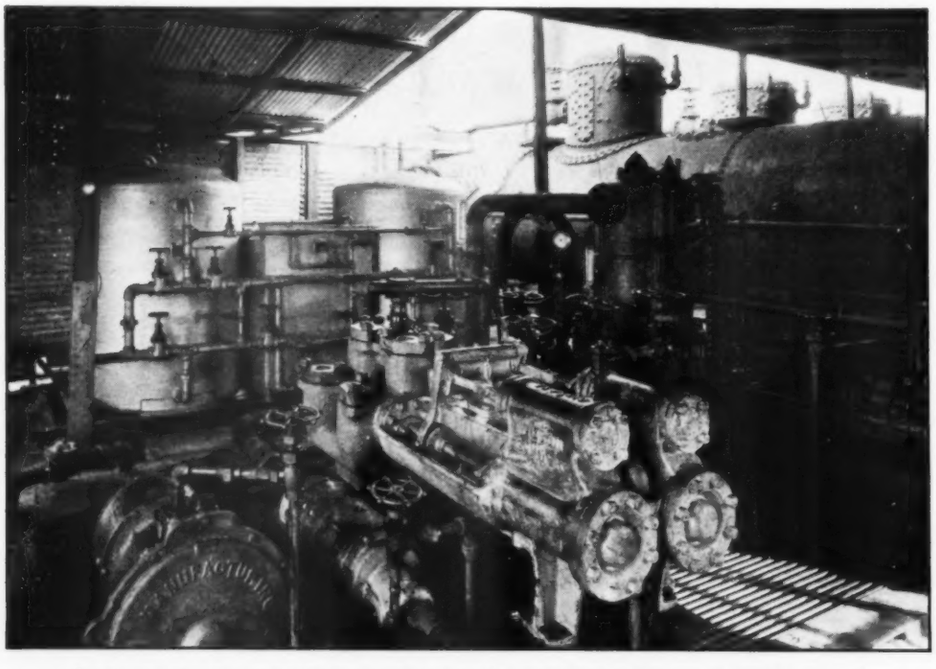
The modern portable water softeners consist mainly of two tanks containing the zeolite beds which are mounted on steel skids. Between these zeolite tanks is the brine tank where the brine solution is made up and held in storage. Before a water softener is installed, one of the first steps taken is to determine the hardness of the water in grains per gallon. With this information, the softening capacity of each of the zeolite beds is easily calculated. The water being treated is passed through only one zeolite tank at a time. A water meter is provided which is set for the tank's treating capacity when the water is turned into it. The meter makes an electrical contact when this quantity of water has passed through it, so that a bell on the derrick floor rings until someone switches the water supply through the other zeolite tank. Brine, the quantity of which is automatically measured, is then charged into the tank which is not in use. This regenerates the zeolite and since the direction of flow is opposite that of the water, it washes away any silt which may have been deposited on top of the zeolite bed. Using two tanks makes it possible to have one ready for service when the other is exhausted. Thirty-six inches of zeolite is used in each tank. The fact that they can be used for filtering is of importance, since the use of a separate filtering plant would represent considerable additional expense, both in initial cost and moving costs.

Softening of water increases boiler efficiency by preventing formation of scale on the steel heating surfaces. The scale acts as insulating material.

TREATING OF FEED WATER

Zeolite softening differs from lime-soda in that it changes all calcium and magnesium salts over to sodium salts which are nonscale forming. When softening with lime-soda softener it is necessary to use lime for the bicarbonates, and soda ash for the sulfates present in the raw water. Therefore it is necessary to make frequent analyses of the raw water to know how much lime and soda ash to use each time the softener is charged, otherwise the hardness of the treated water would vary greatly. This serves to explain why lime-soda softeners are seldom used on drilling rigs as they require the constant attention of a water engineer. However, such is not the case when using zeolite softeners which are simple to operate and require only the attention of an employe on the location.

Zeolite softeners will not operate on water exceeding 140 degrees in temperature, so that in case a preheater or heat-exchanger is used it must be installed between the softener and the boilers. Softeners can be obtained which will stand as much as 500 pounds pressure, though in the interest of economy most of them purchased have a working pressure of 100 pounds, and are used on the suction side of the boiler-feed pumps.



Feed-water charging and softening equipment on drilling-boiler installation in the Mid-Continent

Oil Burner Increase

The sharp increase in oil burner sales in 1936 continued through end of the year. Reports covering the entire year's activity in oil burner sales fixes shipments for 1936 at 196,877 units, an increase of 41.7 per cent over the 138,899 units shipped in 1935. For December, 1936, alone, the shipments totaled 11,300 units, compared with 16,347 in November and with 7,729 units in December, 1935.

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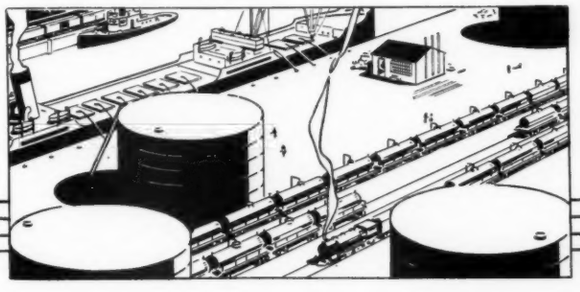

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Let us explain in detail how LAWRENCE SYSTEM may help you to meet any specific financial need and increase your opportunities for profit. Write, telephone or wire Department L-1 of our nearest office. No obligation is involved.

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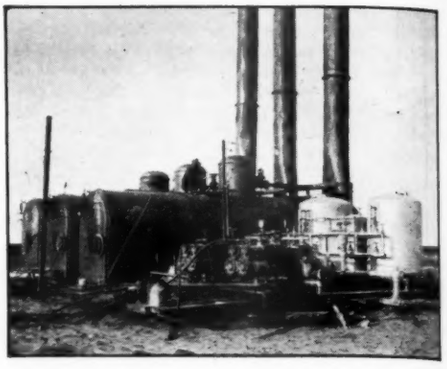
Portable Zeolite Water Softeners Aid in Reducing Scale

By T. P. SANDERS



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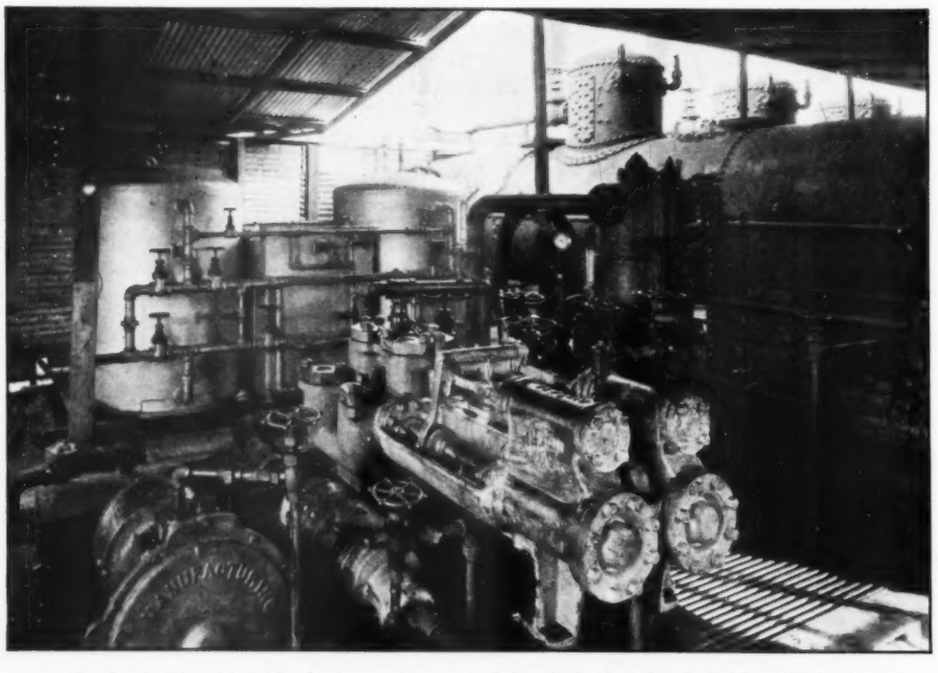

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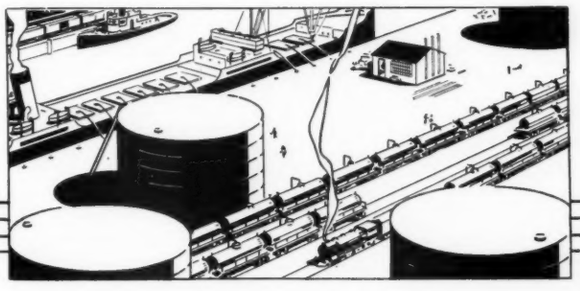

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Bethlehem Steel Company is the largest steel construction organization in the world, with experience in building practically every type of structure and in combating the most difficult conditions. Here is the accumulation of experience derived from handling a large part of the construction in the building era between the Panama Canal and the Golden Gate Bridge.

Furthermore, these fabricating and erecting facilities are coordinated with the rolling mills, foundries and shops of a great steel-making organization. This clears the way for quick action when speed is paramount.

Typical of jobs for the oil industry is the tank farm shown, built on Neville Island in the Ohio River by Bethlehem for the Gulf Refining Company. Bethlehem-built refinery equipment is found in such widely separated localities as Texas, Louisiana, Oklahoma and New Jersey in this country; in France and the Argentine abroad.

Regardless of how large your contemplated job or how small — you will find it worth while to consult with Bethlehem when you are considering building with steel.

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Superior Type "C" 30, 40, 45 and 50 H.P. Horizontal Gas Engine optionally equipped with TIMKEN Bearings on the crank shaft.

Close-up showing double TIMKEN Bearing mounted on the crank shaft of Superior Type "C" engine.

In common with other leading manufacturers of oil field engines, the National Supply Company of Delaware, Superior Engine Division, knows the value of TIMKEN Bearings on engine crank shafts.

Oil field operators, too, know that TIMKEN-equipped crank shafts make engines run smoother; easier to start, especially in winter; increase dependability under continuous operation; reduce fuel and lubricant consumption; and keep maintenance costs consistently low.

Crank shafts last longer when mounted on TIMKEN Bearings because they are not subject to wear; are completely protected against radial, thrust and combined loads and uneven cylinder pressures; and cannot get out of alignment, thus also tending to prevent distortion of the piston and connecting rod assembly.

You will be wise to insist on this modern refinement when buying new engines —whether gas, steam or Diesel.

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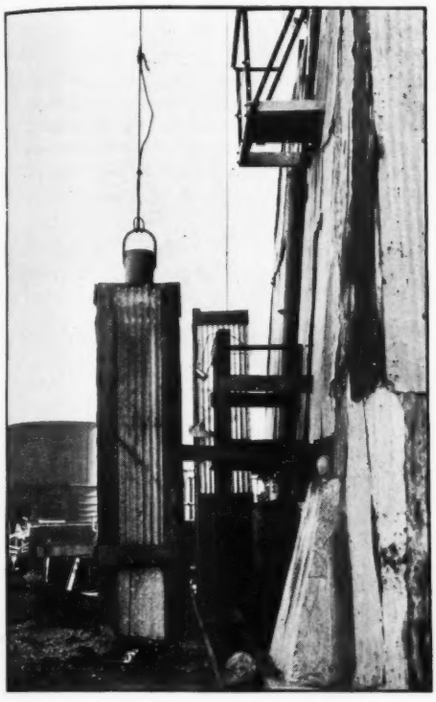
Manufacturers of Timken Tapered Roller Bearings for automobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; Timken Alloy Steels and Carbon and Alloy Seamless Tubing; and Timken Rock Bits.

TIMKEN TAPERED ROLLER BEARINGS

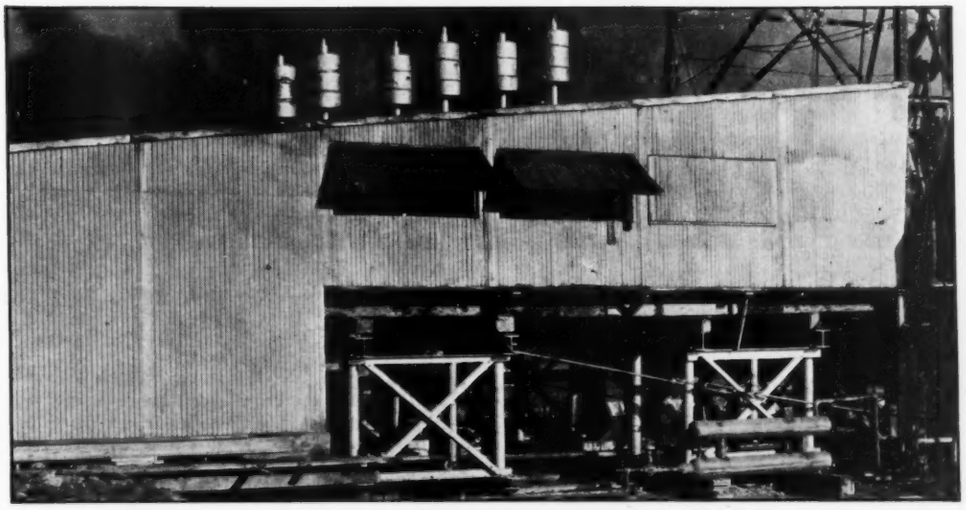
OPERATING IDEAS

Counterweights Outside Rig

As a safety feature on a rig being used to drill a deep test, one large oil company in California hung the counterweights for the



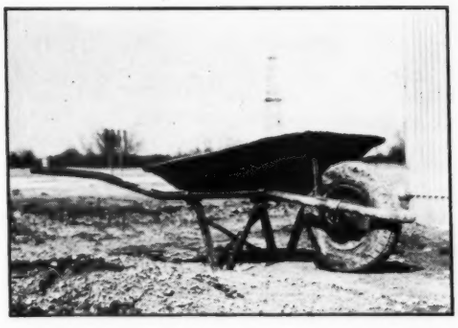
drill-pipe tongs outside of the derrick and built guards of sheet metal around them. This eliminated the chance of the weights causing injuries. They are hung by means of arms projecting from the derrick. On the arms are pulleys through which cables pass.



Oil Drums for Muffling Gas Drilling-Engines

One drilling contractor in the Fitts pool near Ada, Okla., has adopted the practice of muffling the gas drilling-engines with old oil drums. As shown in the accompanying photograph the drums are welded into the exhaust line; the line in the drums being perforated. Thus the exhaust gases are allowed to expand in the drum before being vented through the top. This practice has greatly reduced the noise of the engines. Another practice illustrated here is that of dividing the housing for the rig into sections so that it can be easily torn down and moved to new locations. The sections are especially designed for the drilling equipment used.

Balloon-Tired Wheelbarrow



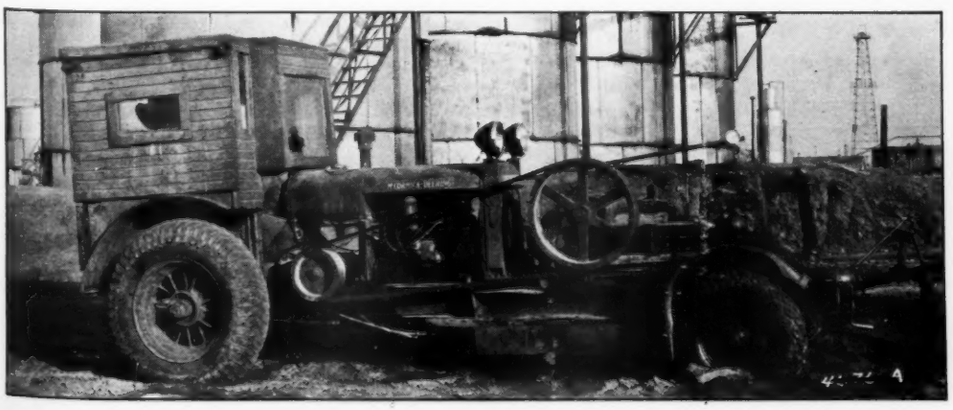
Latest development in wheelbarrows is the use of balloon tires, which prevent the wheel from sinking in soft soil. Experienced operators say they are easier to push, as rocks indent the rubber, making less up and down motion of the material being carried.

Trough for Gathering Oil

In the Maricopa field of California the oil produced from the shallow sand is heavy, and in cool weather it often clogs up pipe line gathering systems. The Standard Oil Co. uses a large steel trough which gathers the output of many wells. Water produced helps to carry the oil as it flows to the pit where oil-water separation takes place.

Tractor Used as Portable Gathering Station

An oil company operating in the Oklahoma City field has converted a tractor into a portable pumping-unit by lengthening the wheel base of the tractor 4 feet; thus making room for a 2½ by 4 by 6-inch reciprocating pump. This unit is capable of pumping 350 to 400 barrels of oil per hour if it is not bucking pressure. It has a 4-inch suction and 4-inch discharge, and cares for 14 different batteries each week, pumping from the lease tanks into the pipe line.

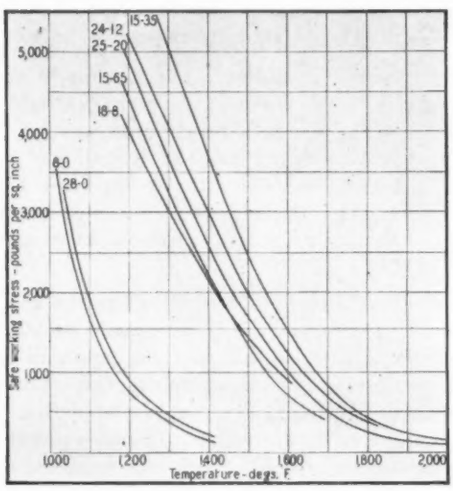


Progress in METALS

By W. L. NELSON

Furnace Castings

Chromium has been found to be an essential element in the composition of most heat resisting castings. In addition to chromium and iron, these castings



may also contain nickel, which element intensifies the action of the chromium and improves the physical properties of the metal.

The primary considerations in the selection of a furnace casting are:

1. Resistance to scaling.
2. Strength at elevated temperatures.
3. Cost.

With regard to scaling, there are three furnace conditions that may be recognized, namely, plain oxidation, sulfidization, and carburization. Plain oxidation is the condition that exists in a furnace that is fired with a low-sulfur fuel and with ample excess air so that no carbon monoxide is produced in the flue gas. Any of the alloys in Table 1 are suitable providing the temperature is not excessive and the strength is adequate.

For fuels containing more than 1 per cent of sulfur, the chrome-nickel steels are generally conceded to be superior. For carburizing conditions such as those which arise when the fuel is burned with an insufficient amount of air, the nickel-chrome steels are most suitable. Carburizing conditions are uncommon in petroleum furnaces but sulfidization is common. Thus the straight chrome and the chrome-nickel steels are the types used most extensively in the industry for tube still supports, tube headers, etc.

Other elements than iron, nickel and chromium are being used. Most manufacturers feel that a relatively low percentage of carbon is advantageous and probably most furnace castings do not contain over 0.4 per cent of carbon. Small amounts of molybdenum, silicon, tungsten, titanium, selenium, columbium, etc., have been used and although the characteristics of the castings are generally improved, the real test of the value of these special elements depends upon the cost as compared with the aforementioned more simple steels. The approximate working strengths of these alloys are indicated in Figure 1. Only the most general conclusions can be drawn from Figure 1. That is, it is not intended for—nor is it accurate enough to justify a comparison between particular alloys.

TABLE 1—ALLOYS SUITABLE FOR FURNACE CASTINGS

		Approximate Scaling Temperature, °F.		
		Oxidizing	Reducing	Sulfiding
Chrome	13 Chrome	1,400	1,100	.....
	18 Chrome	1,500	1,300	1,300
	23 Chrome	1,800	1,500	1,500
	28 Chrome	2,100	1,700	1,700
Chrome-Nickel	18 Chrome 8 Nickel	1,600	1,300	1,600
	24 Chrome 12 Nickel	2,000	1,900	2,000
	28 Chrome 10 Nickel	2,100	1,900	2,000
	25 Chrome 20 Nickel	2,100	2,000	2,100
Nickel-Chrome	65 Nickel 15 Chrome	1,800	2,100	.....
	35 Nickel 15 Chrome	1,900	2,000	.....
	25 Nickel 20 Chrome	2,000	2,000	.....

Impact Resistance of Nickel Steels at Low Temperatures

At the exceedingly low temperatures encountered in some solvent dewaxing processes, ordinary steel becomes brittle and failures occur in thicknesses of material that would appear to be amply strong by normal tests. For these reasons steels for low-temperature service have been tested by the Charpy impact method. This test consists in measuring the energy in foot-pounds that is required to break a notched specimen of the material. The specimen is ruptured by a sharp blow applied at the notched section. The Charpy test is the method of test that is used, if brittleness is the primary cause of failure or if the material is to be subjected to severe conditions of shock or sudden application of load.

Nickel steels appear to be among the best relatively cheap materials for low-temperature conditions. The behavior of nickel steel is indicated by the following table which was taken from a paper by D. A. Campbell, University of Alberta, Canada, in Transactions of the A.S.T.M., September, 1935.

CHARPY IMPACT TESTS

		Charpy impact in ft./lbs. specimen					
Heat treatment—	Steel	70° F.	15° F.	0° F.	—10° F.	—20° F.	—35° F.
Normalized	SAE 2110	68.7	66.7	70.0	72.0	72.5	64.2
	SAE 2320	41.0	32.2	31.0	30.8	29.5	25.5
	2% Nickel	43.6	33.5	32.5	30.0	30.0	24.2
	SAE 2330	24.0	22.8	20.2	17.7	17.1	15.6
	SAE 2175	12.4	7.5	7.0	5.8	7.0	5.8
	SAE 2375	14.8	12.8	12.7	12.4	13.2	13.7
Quenched	SAE 2110	22.8	20.1	20.9	23.7	20.7	24.3
Drawn 440° F.	SAE 2320	27.9	33.0	29.9	28.7	29.5	27.7
	SAE 2330	18.9	20.3	17.7	22.7	20.7	14.7
Drawn 810° F.	SAE 2110	38.7	40.0	38.1	41.2	38.0	37.5
	SAE 2320	37.8	36.0	38.5	37.0	38.5	38.0
	2% Nickel	28.4	30.0	31.2	29.5	31.5	28.0
	SAE 2330	29.6	32.0	33.8	31.6	30.5	29.3
Drawn 1150° F.	SAE 2110	67.7	68.0	70.0	77.0	79.5	74.5
	SAE 2320	56.1	53.0	65.0	63.5	64.0	65.0
	2% Nickel	55.1	53.1	57.8	57.0	53.2	52.0
	SAE 2330	48.7	53.9	52.6	51.5	49.5	.....
	SAE 2175	25.6	20.6	21.0	18.0	15.6	17.4
	SAE 2375	23.0	24.5	23.4	19.1	22.0	21.5

Metallurgical Terms

CREEP STRENGTH OR CREEP LIMIT

The creep strength of a material is a measure of the strength of the material at elevated temperatures. For many years regular tensile-strength tests were conducted at elevated temperatures but the test strengths were not found to be dependable under working conditions. At high temperatures the metal gradually stretches and in time fails at a strength far below the strength given by the short-time test. Thus, the real measure of the usefulness of a material used at elevated temperatures is the amount of creep or stretch that will take place.

The creep strength is determined by subjecting a tube of the material to internal pressure for a long period of time and at an elevated temperature. The test is repeated at several pressures. Some of the pressures cause too much stretch and the tube fails after a relatively short time. Thus, creep strength involves three factors: (1) Strength; (2) temperature, and (3) time, and may be defined as the stress expressed in pounds per square inch that a material can withstand at a given temperature without exceeding a given rate of creep or stretch. Common units of the rate of creep are: 1 per cent in 10,000 hours (417 days) and 1 per cent in 100,000 hours (11.4 years).

Conditioned Mud Used to Kill Wild Well in Wyoming

By L. G. E. BIGNELL

Wild wells have no restriction as to locality for they may break loose in any field at any time as witnessed by the big gasser in northern Wyoming brought under control February 28 after flowing wild since January 19, 1936. This well, known as Stock Oil Co. No. 1 Allen in SE NW SE section 33-56n-97w, in Big Horn County, Wyoming, has caused a lot of trouble and taken more than a year to bring under control, all because old wells in this field were improperly plugged when abandoned. This well is near Lovell, Wyo., in the Garland field, opened in 1907 as a small oil field producing from the Frontier formation at a depth of 700 to 900 feet. Dakota production was found at about 1,500 feet and developed as a gas field in 1919. The Embar-Tensleep was found in 1927 at a depth of about 3,000 feet and also developed as a gas field.

Mixing and placing 4,000 sacks of weighting material

In 1935 oil-saturated cores were secured from the Tensleep sand on the north end of the Garland anticline, where several wells have developed big gas flows on the crest of the structure from the Embar and Tensleep formations and oil from the underlying Madison lime found at about 4,000 feet. In drilling to the Embar-Tensleep formation in No. 1 Allen a heavy gas flow was encountered at a depth of about 3,820 feet and the well came in out of control. The 5-inch drill stem used was cut by flow of sand-laden gas at a point about 1,000 feet below the kelly and dropped into the hole alongside of the balance of the drill stem resting on bottom. Part of this drill stem was later fished out of the hole and the Rocky Mountain Drilling Co. then took contract to kill the well and bring it under control.

The first work was to run about 1,200 feet of 4-inch drill stem in the hole alongside of the junked 5-inch stem and then to pump mud below the Frontier formation. The gas had cratered through an old Frontier well located about 50 feet away from the No. 1 Allen, and this crater caused considerable trouble in attempting to bring the wild well under control. It was estimated that No. 1 Allen made 60,000,000 feet of gas at about 400-pound pressure at the surface.

In May, 1936, a relief well was started about 490 feet east of No. 1 Allen and described as No. 1-A Allen. While this well was being drilled, 14 abandoned wells near the wild well were cemented. By the middle of July the relief well reached the Embar-Tensleep formation and water was pumped into this well hoping it would find its way across to No. 1 Allen and kill it. This was not successful. The No. 1-A Allen was drilled straight and has since been deepened to the Madison formation and is an oil producer.

To aid in bringing this wild well under control Ohio Oil Co. deepened No. 17 Smith, an old Frontier well, located about 425 feet southwest of No. 1 Allen to the Embar-Tensleep sand. This well was completed about the same time as No. 1-A Allen and water pumped into it also.

During the early part of June the fire at No. 1 Allen was extinguished by using a lateral escape manifold constructed out of 300 feet of 10-inch casing. This assembly weighed about 7 tons and required five winch-equipped trucks to handle it and lower it over the upper end of the casing in No. 1 Allen.

As the pumping of water into the Embar-Tensleep formation through No. 1-A Allen and No. 17 Smith did not seem to have any effect on the gas volume escaping from No. 1 Allen and as the fire was extinguished it was decided early in September to attempt to mud this formation by pumping a Baroid mud mixture into the hole after another section of drill pipe had been fished out of it. This attempt to mud off the formation was not successful and the gas caught on fire and destroyed the second rig.

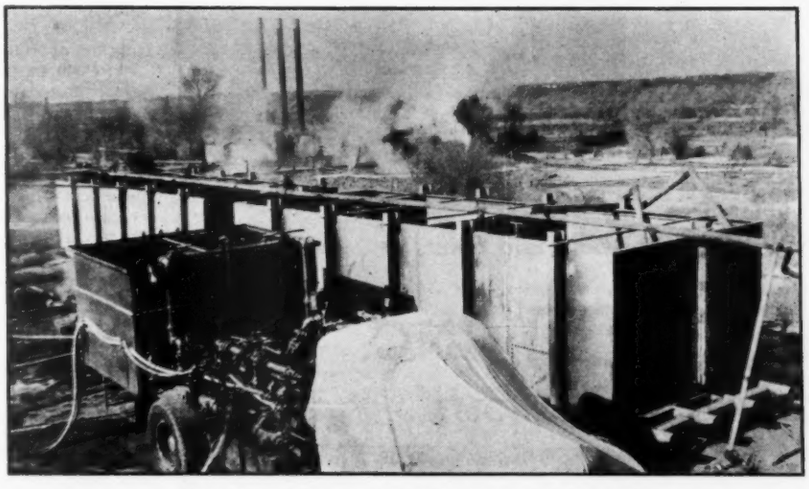
It was then decided to drill another relief well located at a distance of about 190 feet northwest of No. 1 Allen to be known as No. 1-B Allen. On December 23 this hole reached a depth of 3,800 feet and about 5,000 bbls. of water was pumped into it every 24 hours from that time until late in February and the volume of gas reduced from 60,000,000 to about 10,000,000 feet and the casing head pressure from 400 to about 150 pounds. This encouraged the operators to again attempt to mud off the gas sand and this was successfully done on Sunday, February 28, and the hole has since been filled with cement and abandoned. It is proposed to deepen No. 1-B Allen to the Madison in lieu of the lost hole.

Mud hogs pumping mud into No. 1 Allen

The repair work on the attempt made to mud off the gas sand in September last year was supervised by H. V. Cash, head cementer for Perkins Oil Well Cementing Co., Lovell, Wyo.; Paul Stock, president Stock Oil Co.; Dee Sikes, district manager, Baroid Sales Co., Tulsa, and William Phillips, engineer, Baroid Sales Co., Casper, Wyo.

In making the final and successful attempt to mud off this well these men decided that if a mixture of Baroid could be pumped into the hole fast enough against the 10,000,000-foot flow at about 150-pound pressure it would be possible to force this mud back into the formation and seal the gas from the hole.

To do this it was estimated that two 7½x20-inch steam pumps could handle about 16.1 bbls. of Baroid mud per minute and it would require about 11 minutes of pumping at this rate to place this 19-pound mud in the hole. The mud was mixed in two steel tanks placed near the well and circulated through the pump upon the Perkins cementing truck so



Preparing mud in two still vats before pumping to well

that it was in first-class condition when the two steam pumps started handling it into the hole on Sunday afternoon. It actually required 10 minutes and 46 seconds to place this mud which filled the hole and part of it is believed to have escaped into the porous Frontier formation penetrated by this well between 400 and 1,100 feet.

Before the mud was pumped into the hole a three-quart shot of nitroglycerin was discharged inside of the 4-inch stem and the bottom joint of pipe shot away. This permitted easy exit of the mud and the gauges on the pumps only registered 250 pounds maximum pressure while this work was under way.

As soon as the well was killed a mixture of cement and the balance of the Baroid mud was pumped into the well and in 70 minutes the gauge on the mud pumps registered 1,000 pounds, indicating that the crevices in the formation had been filled and the hole was successfully plugged.

As part of this work was carried on during subzero weather, water pumped into No. 1-B Allen, relief well, traveled through the formation and found exit with the gas escaping from No. 1 Allen, the wild well. This water froze into three 30-foot high mounds around the mouth of No. 1 Allen and it was decided to ignite the gas at the mouth of this well to melt this ice. This fire was then snuffed out, using a special form of oil field cannon developed by Frank Lesh, oil well shooter of Casper, Wyo. This "cannon" is in reality about 300 feet of 6-inch pipe screwed to form a short pipe line through which two 10-quart torpedoes were forced by pumping fluid back of them. The end of this "cannon" was at the mouth of the well where the nitro was detonated by time fuse. This method of placing the shot was necessary because of the cratered condition around the wild well which did not permit of easy entrance to the well site while the gas was on fire.

It is estimated that it cost the Stock Oil Co. and Yale Oil & Refining Co., joint owners of this well, about $250,000 to bring this well under control and during the time it ran wild one man lost his life, two derricks were burned and three relief wells were drilled. It was the most spectacular fire in a northern oil field for some time and the owners are to be congratulated upon their perseverance in finally killing the well and removing the menace it created.

H. C. PRICE, INC.

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Regardless of the weather or location, H. C. PRICE, INC., welding crews, consisting of experienced electric welders and supervisors, will be found making the best possible progress on the construction of Oil and Gas Pipe Lines throughout the United States.

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Symposium on Radiography, X-Ray Diffraction Methods

The American Society for Testing Materials has recently published a bulletin, entitled "Symposium of Radiography and X-Ray Diffraction Methods," in which are contained 12 extensive technical papers and a large amount of discussion prepared by outstanding authorities in these fields. Six of the papers deal with radiography, covering principles, foundry applications, radiography in the welding shop, miscellaneous applications of radiography and fluoroscopy, radiographic specifications, and gamma-ray radiography and its relation to X-ray radiography. An appendix to this latter paper provides instructions for radiography with radium. Authors of the papers in this section include John T. Norton, Earnshaw Cook, J. C. Hodge, Herman E. Seeman, H. H. Lester and Norman L. Mochel.

The six papers devoted to diffraction cover equipment and methods, constitution of alloys, chemical analysis, determination of particle size, applications to nonmetallic materials, and to problems of cold work, preferred orientations, and recrystallization. Authors in this section include: Charles S. Barrett, Kent R. Van Horn, Wheeler P. Davey, John T. Norton, G. Harvey Cameron and George L. Clark.

Copies in cloth binding can be obtained from A.S.T.M. headquarters, 260 S. Broad Street, Philadelphia, Pa.

Measure Heats of Combustion of Paraffin Hydrocarbons

The following appears in Technical News Bulletin of the Bureau of Standards for February:

"Data on the heats of combustion of organic compounds are of importance chiefly because such data are necessary in the only feasible method of determining the free energies of formation of many compounds. A knowledge of the free energy of formation of a compound is needed by the chemist to enable him to predict from thermodynamic considerations the conditions under which given reactions involving the compound may take place, and to calculate, as he will want to do, the equilibrium constants of these reactions.

"While the heats of combustion of many organic compounds have been measured, most of the measurements were made a number of years ago when experimenters did not have the advantage of modern methods, or of the more nearly pure materials which are now available. Consequently, many of the older values of heats of combustion are not sufficiently accurate to permit the calculation of reliable free energy data.

"RP966 in the February number of the Journal of Research describes accurate measurements made recently by R. S. Jessup, of the heats of combustion of seven organic compounds, which are members of a series of compounds known as the normal paraffin hydrocarbons, having the general formula C_nH_{2n+2}. The members of the series on which these measurements were made are those for which n has the integral values from 6 to 12 inclusive. The results obtained are believed to be accurate within a few hundredths of 1 per cent."

Lone Star Earnings

PITTSBURGH, Pa.—Lone Star Gas Corp. preliminary report of 1936 earnings after all charges and preferred dividends indicate an equivalent to $1 a share on common stock.

L. B. Denning, president, said books for the year have not been closed and that the report is subject to adjustments.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Skimming and Cracking Operation With East Texas Oil

What is considered to be a reasonable yield of gasoline and other products from East Texas crude oil by skimming and cracking?—L. M. R.

The yield of gasoline, etc., from any crude oil will depend upon the quantity of the oil, equipment, type of operation and the products sought. The importance of volatility and octane rating when marketing gasoline requires the refiner to operate not always for making yield but for quality. Much more gasoline of high endpoint and low octane number is obtainable from East Texas oil than if the opposite is desired.

A combination skimming and cracking plant processing East Texas oil for maximum yield of high-quality gasoline, a product of excellent volatility and high-octane rating, made this report.

The straightrun operation yielded gasoline 20.35 per cent, topped crude oil 79.23 per cent, loss and gas 0.42 per cent. This gasoline tested: Gravity 68° A.P.I., initial 91° F., endpoint 292° F., octane number 68.8.

The topped oil was cracked yielding (per cent of charge): Gasoline 55.98, residue 36.83, gas and loss 7.19.

The combined operation produced this yield, based on the crude oil:

Products—	Per cent
S.R. gasoline	20.35
Cracked gasoline	44.35
Total	64.70
Residuum	29.17
Gas and loss	6.13

The analyses are given in the table.

CRUDE OIL AND PRODUCTS

	Crude oil	S.R. gasoline	Cracked gasoline	Residue
Gravity, A.P.I.	38	68.3	60.8	12.3
Initial B.P.	106	91	83	...
Per cent:				
10	201	134	131	...
20	280	153	156	...
50	546	197	262	...
90	...	254	362	...
Max. B.P.	...	292	395	...
Octane No. (M.M.)	...	68.8	69.8	...
Vapor pressure	...	10.4	11.9	...
Viscosity, S.F. at 122° F.	...	...	...	82
Flash P.M., °F.	...	...	...	174
B.S. and water	...	...	...	0.4

The modern cracking unit is designed to be flexible to fit the varying market demands. It is adapted for the highest yield of gasoline or furnace oils, diesel oils or type of residue. The kind of operation will depend then on the charging stock available and what sort of products are to be made.

Peroxides Assist Formation of Gum in Cracked Gasoline

Can you give me an outline of the methods used for preventing the formation of, or the removal of, peroxides in gasoline?—D. N. E.

The study of the connection between the presence of peroxides in gasoline and the formation of gums was made by Pipik and Mezhebovskaya. A translation of the original report, made by the petroleum division of the American Chemical Society, appeared in The Oil and Gas Journal. This report describes several methods for the control of peroxides.

The treatment for removing the peroxides consisted in filtering through Florida earth (1) in liquid and (2) in vapor phase, (3) bubbling gaseous sulfur dioxide through the gasoline, scrubbing with water and alkali, then distilling with steam, (4) refining with 5 per cent caustic soda solution, (5) refining with 5 per cent caustic solution and 2 per cent formaldehyde solution.

Peroxides were determined by adding a sample of the gasoline to a 5 per cent solution of potassium iodide in alcohol acidified with acetic acid and titrating the liberated iodine with thiosulfate. Refining with Florida earth in vapor phase appeared to be more effective than filtering through the earth.

The following conclusions are stated tentatively:

"1. It may be assumed that the formation of gums is closely connected with the concentration of peroxides.

"2. In some untreated gasolines after prolonged storage a decrease in peroxides and an increase in gums is observed. This we do not consider to be contrary to the correlation between the presence of peroxides and the tendency to gum formation, but assume that peroxides are converted to gums.

"3. Frequently the more peroxides are found in refined products than in untreated ones; since the formation of gums in refined samples takes place at a slower rate, it is easier to observe the intermediate stage of oxidation, the formation of peroxides, while in untreated samples the peroxides are quickly transformed into gums and therefore may not always be found.

"4. As the peroxides represent one of the states of the auto-oxidation of gasoline it is necessary to have them removed and prevent their reappearance.

"5. Of the various methods of removing peroxides investigated by us the most effective appears to be the passing of gasoline in vapor phase through Florida earth. However, after a certain period of time peroxides begin to reappear in gasoline refined with Florida earth.

"6. Inhibitors retard the formation of peroxides in gasoline. In order to obtain the highest inhibiting effect the inhibitor should be added immediately after the refining, while the gasoline is still free of peroxides."

Reference: The Oil and Gas Journal, July 16, 1936, page 50.

CHEMICALS FOR THE PETROLEUM INDUSTRY

CAUSTIC SODA OR SODIUM HYDROXIDE

Use—Making sodium plumbite (doctor solution), neutralizing, water treating, and grease making.

Forms—Solid and flake.

Formula—NaOH.

Molecular weight—40.

Specific gravity—2.13.

Melting point—604° F.

Soluble in water, alcohol and glycerin.

Color—White opaque solid.

Deliquescent.

Composition:

Sodium hydroxide NaOH	96.6
Sodium carbonate Na_2CO_3	0.8
Sodium chloride NaCl	2.2
Sodium oxide, actual Na_2O	75.4

Packing—Usually drums 700 pounds net.

(Note: Liquid caustic soda will be described next week.)

Code Formula for Obtaining Price of Gasoline and Oil

What is the formula for arriving at the refinery price for gasoline when the cost of the crude oil is known?—E. G.

The code for the petroleum industry of 1933, contained a section fixing the market price of crude based on the selling price of gasoline. This could be reversed to give the price for gasoline. The formula is in Article 1, Section 6 of the code, the first part of which is quoted:

Section 6. During such periods as the production of crude petroleum in any state is within the allocation to that state, as provided in Section 3, Article 3, of this code, it shall be an unfair practice within that state to buy, sell, receive in exchange, or otherwise acquire Mid-Continent crude petroleum of 36-36.9° A.P.I. gravity during any calendar month at a price per barrel (to the nearest cent) less than that which will be determined by multiplying the average Group 3 tank-car price per gallon of U. S. Motor gasoline of 60-64 octane rating during the preceding calendar month as ascertained and declared by the federal agency designated by the president, by the constant 18.5. The constant 18.5 represents the relationship, during the period 1928-1932, between the average price per barrel of Mid-Continent crude petroleum of 36-39.9° A.P.I. gravity and the average Group 3 price per gallon of U. S. Motor gasoline of 57-65 octane rating or 58-60 U. S. Motor gasoline. For crude petroleum of lower or higher gravity and/or different quality and/or in different locality, fair and equitable differentials between the price of 36-36.9° Mid-Continent crude petroleum, determined as above prescribed, and the prices quoted for other crude petroleums shall be observed.

Timken Index As Related to Film Strength of Lubricating Oil

What is the meaning of the Timken Index used in reference to the oiliness of a compounded lubricating oil?—N. D.

In their description of a study of the effects of chlorine addition agents on lubricating oils Lincoln, Byrkit and Steiner made use of the term Timken Index and defined it as follows:

"Since it was desired to compare the relative effect of different molecular structures on the chlorine in the molecule, a function of the Timken film strength was developed which is termed the 'Timken Index' (T. I.) and is expressed:

$$\text{T. I.} = \frac{A - B}{C}$$

Where A = Timken film strength of 1 per cent blend. B = 8.5, film strength of Mid-Continent base mineral oil (S.A.E. 30). C = chlorine in addition agent, per cent.

For example, a 1 per cent blend of triphenylmethyl chloride, which contains 12.7 per cent of chlorine, in 99 per cent of the standard mineral oil gave a Timken film strength of 74.3 pounds:

$$\text{T. I.} = \frac{74.3 - 8.5}{12.7} = 5.181$$

Therefore, the Timken Index expresses the improvement in Timken film strength in pounds produced by each per cent of chlorine in the particular molecular arrangement possessed by the addition agent."

Reference: Lincoln, Byrkit and Steiner, Ind. Eng. Chem., 28, 1191, 1936.

PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Capillary Theory Explained

Will you please explain the capillary theory of oil accumulation in sand reservoirs? Is it a theory accepted by petroleum geologists?—G. E. K.

It is hard to state how many geologists subscribe to the capillary theory of oil accumulation but many do and it may be outlined by a simple statement of the phenomena.

The capillary theory of oil accumulation assumes surface tension will cause oil and water to be drawn into capillary or hair like openings without regard to the force of gravity as water is drawn into a sponge or as ink is absorbed by a piece of blotting paper. Surface tension is that property, due to molecular forces, which resides in the surface film of all liquids and tends to bring the contained volume into a form having the least superficial area. Particles lying below the film, being equally acted on from all sides, are in equilibrium as to forces of cohesion, but those in the film itself are attracted inward and tension results.

As water has about three times the surface tension of crude oil, capillary action would have about three times as much effect on water as on oil. The constant tendency of capillarity is to draw water into the finer openings, displacing the oil and gas and so forcing them to larger openings. This theory deals only with the removal of oil and gas from source rocks. No cause is assigned for the entrance of invading water into the fine grained sediments.

Experiments have demonstrated that the first liquid to wet sand grains continued to adhere to them. If this be true capillarity would oppose all motion, and it would be impossible for water to drive oil out of shales or other rocks. Capillarity is suggested as the means of "sealing up" of oil pools; this would necessitate a resistance against flow instead of a tendency toward it.

Protecting Tank Bottoms Against External Corrosion

Please tell me how asphalt and some form of protective paper may be applied to steel tank bottoms to protect them against external corrosion. Will this method stop corrosion already started? Is it effective, if effective at all for all kinds of corrosion or just for certain kinds? What different kinds of corrosion attack tanks. Will there be one kind of corrosion in one field and some other kind in another field?—D. T. N.

It has been found desirable to apply asphaltum and a good grade of asbestos paper to the bottom of steel tanks, especially where they are set on grades not easily drained and kept dry. The thing most desirable is to so make the grades upon which the tanks are to be set as dry as possible but there are certain conditions under which a certain amount of moisture will collect under the tanks and start corrosion.

If old tanks are to be reset the bottoms should be thoroughly cleaned and all old paint and dirt removed and the steel wire-brushed as clean as possible and the bottoms examined carefully for evidence of corrosion. If pitting has started the pits should be measured with a pit gauge and it is possible to make repairs by filling the pits with welding metal. Before this is done the rust in the pits should be heated with an acetylene torch and the rust removed with wire brush. Then using an electric welding outfit it is possible to fill the old pits with metal. To be certain good bond has been had between the tank steel and the metal used to fill the pit holes it is well to dress the weld with a portable grinder and then inspect to be sure the metal fills the holes completely. Another advantage of grinding the weld smooth is to remove sharp edges or points in the metal and prevent puncture of the paper to be applied later.

To apply the asphaltum and asbestos paper turn the bottom sheets upside down near the grade and cover with hot asphaltum. While this asphaltum is still soft roll the asbestos across the bottom and trim at edges. Lap the layers and be careful not to lay the paper over the bolt holes or that portion of the tank bottom to be later covered by the channel iron strips holding the bolt heads. Between the sheets rubber gasket is used and it is not desirable to have asbestos paper between this gasket and the tank metal for the paper may be softened by the liquid in the tank and in this way permit leaks to occur.

When the bottom is covered with the asbestos paper it is well to smear another coat of hot asphaltum over the surface to be turned against the tank grade. After the bottom sheets have been bolted together it is best to lift the bottom off the grade and reach under it and apply hot asphaltum over the channel iron strips and bolt heads.

When this work is properly done the tank bottom will be protected against external corrosion due to moisture in the grade and the life of the tank lengthened.

For internal corrosion which may be caused by moisture or hydrogen sulfide or a combination of both elements it is well to protect the tank sheets by applying a good coat of paint. See that the sheets are thoroughly cleaned and one good form of protective coating is aluminum paint sprayed on evenly over the entire inside surface of the tank. A thick coat of this paint on the under side of the tank deck will aid materially in preventing iron sulfide scale from forming there and later falling off and settling on the bottom of the tank. If the tank is old and already pitted many of the pits can be filled with welding metal as described for the treatment of the tank bottom on the outside.

Magnetic Storm Reports

It is noted that reports of magnetic storms are carried in The Oil and Gas Journal from time to time and I would like to know the significance of magnetic storms to the oil industry. Is a magnetic storm the same as an electrical storm?—C. R. B.

Answering your second question first, a magnetic storm is not the same as an electrical storm. A magnetic storm is any marked disturbance of the earth's magnetic conditions. There is a well-established connection between sun spots and such magnetic disturbances. An electrical storm, on the other hand, is created by the discharge of atmospheric electricity from one cloud to another or from a cloud to the earth.

The significance of magnetic storms to the oil industry lies in the fact that they have a distinct bearing on geophysical prospecting with magnetometers, impairing the accuracy of such work. As magnetic storms are recorded almost simultaneously at the various observatories throughout the world, it is obvious that magnetometer work done during any one of such storms would be likely to contain error. Outside of this department of magnetometer surveying it is not apparent how magnetic storms would be of any peculiar interest to the oil business.

These storms have been reported through The Oil and Gas Journal since early in 1930 so that geological departments having magnetometer crews at work might know when such storms occurred and their approximate magnitude and with this knowledge at hand can check and correct field reports.

Mixing Two Grades of Fuel Oil in Large Tank

I must mix with air two fuel oils of different gravities 50 per cent each, in a tank of 60,000 bbls. with a diameter of 130 feet. Please tell me compressor capacity and pressure needed to do this work.—S. B. B.

Your information is incomplete but by making certain assumptions we may be able to give you some assistance. A tank 130 feet in diameter holding 60,000 bbls. of oil would be filled to a depth of about 25 feet 6 inches. Using .434 pound per foot of hydrostatic head the pressure at the bottom of the tank would be about 11 pounds per square inch. So the compressor need not build up in excess of 15 pounds per square inch to work against this head.

As to volume. The volume of 60,000 bbls. of oil is about 336,000 cubic feet. If a portable compressor capable of delivering 220 feet of air per minute is used it will require about 24 hours to deliver to the tank a volume of air equivalent to the volume of the oil in the tank. This should be enough if this method will actually mix the two oils which we doubt but you state you "must mix with air" so we give you this answer to your problem.

You do not give us the gravities of the two fuel oils but we are assuming that one is lighter than the other and has segregated from the heavier oil and in this way you actually have two batches of oil in this tank and find it necessary to again mix them to make them suitable for sale.

Our suggestion is that you arrange to take oil from the top and bottom of this tank at the same time and pass these two different grades of oil through a pump of the rotary type so they will be thoroughly mixed before they are returned to the tank.

To accomplish this connect into the pipe line flange with a section of pipe to go direct to the suction side of the pump. In this line near the tank insert a valve and beyond the valve fit a tee with the run on the horizontal pipe and the other opening turned up so that a riser can be used to extend up to the top of the tank and over and a syphon formed to pick up oil from the top of the tank.

In this riser it will be quite necessary that a valve be inserted in the pipe just above the tee and when the pump is started the oil can be made to flow in approximately equal quantities from both top and bottom of the tank by manipulation of these valves. For instance, the valve on the horizontal line could be closed when the pump was started and the valve on the riser opened and in this manner oil would be started over from the top of the tank. When this stream filled the suction to the pump it would be possible to gradually close the valve on the riser and open the valve on the horizontal connection in this way starting flow of some oil from the bottom of the tank to the pump. By manipulation of these two valves it should be possible to finally adjust the relative quantities of oil from top and bottom of the tank to give a good mixture through the pump. This mixed oil could be returned to the top of the tank and if this mixing is carried on long enough the oil should ultimately be in the desired condition.

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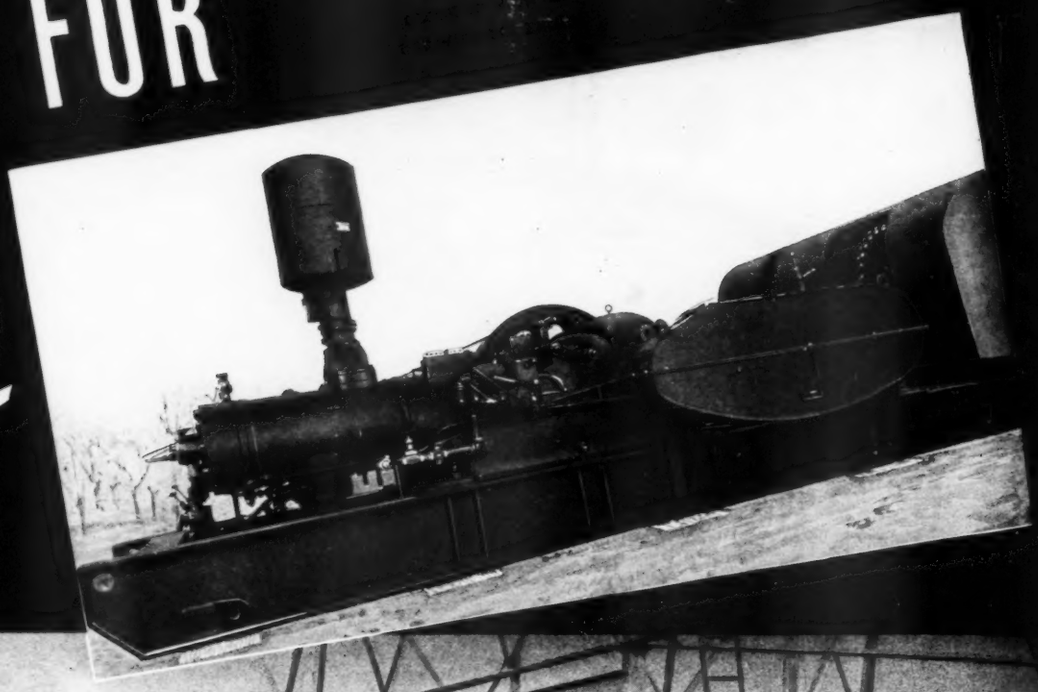

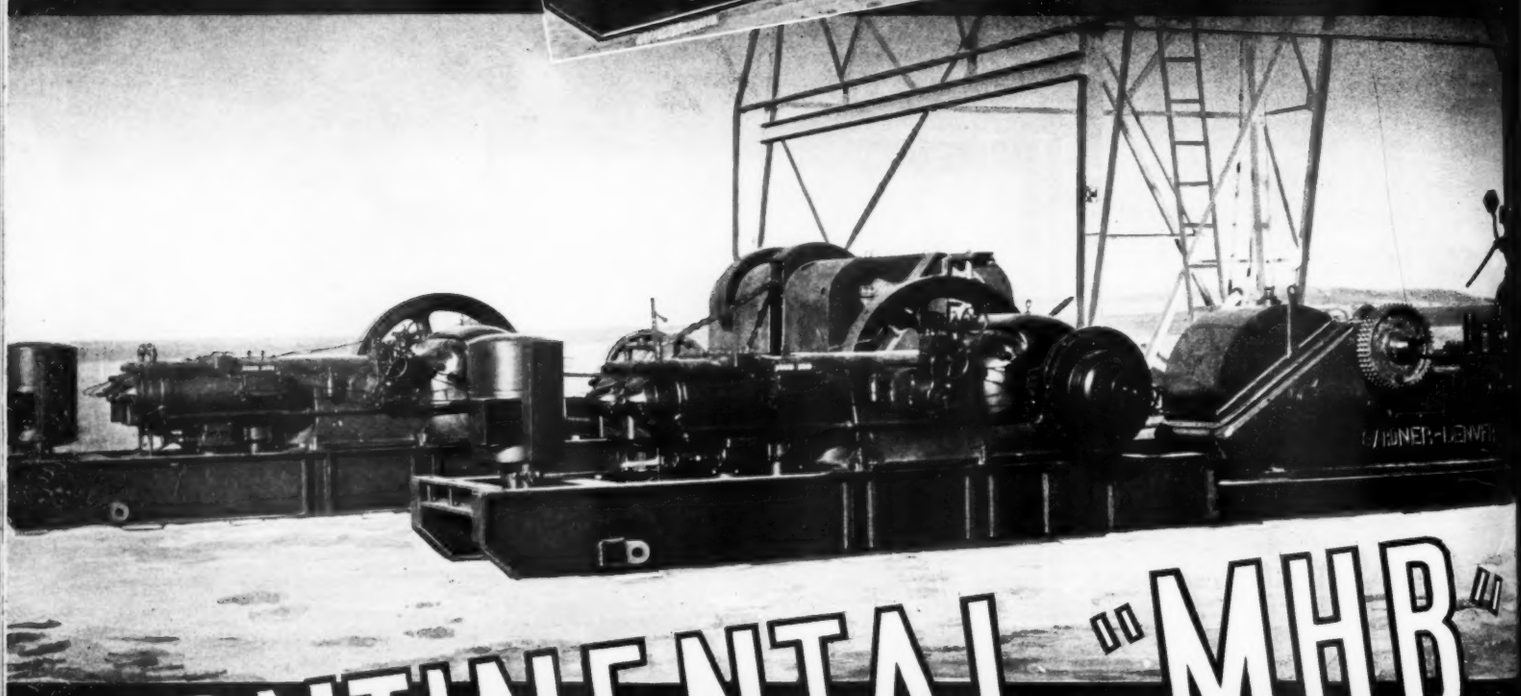

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FIELD OPERATIONS

Summarizing the Week's Developments

Wildcats in Lincoln, Seminole and Okmulgee counties, Oklahoma, were showing oil and gas. A Tillman County wildcat was pumping about 8 bbls. of oil an hour. Thirteen producers in the Fitts field, Pontotoc County, and seven in the Olympic field, Okfuskee County, were completed. Several producers have been completed in the new Tulsa Airport pool.

KANSAS

Two large producers were completed in the Lerado field, Reno County, Kansas, and five producers were added to the Trapp pool, Russell County. A wildcat was completed as a producer in the Geneseo district, Rice County. The Bahruth pool, Cowley County, was extended, and another extension appeared imminent for the Graber pool, McPherson County.

TEXAS

A 1,580-bbl. well in Foard County, North Texas; a 2,000-bbl. well in Wichita County and a 1,000-bbl. well in Young County, were unusual features in the general Wichita Falls district in the past week. In West Texas, a 1,680-bbl. completion in Ector County; a 1,054-bbl. pumper in Upton County, and a 1,060-bbl. well, flowing, in Ward County, were the best of a number of excellent producers. Eight of the completions in Winkler County averaged 1,140 bbls. per well initially. Dry holes in Terry and Terrell counties, West Texas, wildcats, both deep tests, were important. Southwest Texas results were not outstanding, but an increase in operations in recently discovered fields is noteworthy. Discovery of oil on an old salt dome in Jefferson County, Texas, and on a similarly old dome in Iberia Parish, was gratifying, as these domes, while long known and often drilled, have never before shown oil production. Talco in northeastern Texas had 13 new locations. A deep outpost test in the Talco area, which was dry in the Paluxy sand, was also barren in the Lower Trinity.

LOUISIANA-TEXAS

The important test in the Lodi area between the recently opened Jefferson pool and the Rodessa field, on the Texas side, tested 303 bbls. in a 12-hour test after the well was acidized. It is not yet a completion, and neither is the Jefferson discovery well, but they have opened a vast acreage along a 12-mile stretch to the Rodessa's southeast edge. The first Arkansas location in the North Rodessa area has been made in the southwestern corner of Miller County. A new gas reserve was opened in Bienville Parish, Louisiana, with a 50,000,000-foot well in the Basal Glen Rose A 70,000,000- to 90,000,000-foot gasser on the northeastern flank of the Sligo field, in Bossier Parish, was important. The gas is rich in distillate.

MICHIGAN

The Buckeye field in Gladwin County, Michigan, has increased the production of that state 35,170 bbls. a day. Five new wells in that pool combined to produce 7,950 bbls. initially. Buckeye, some operators believe, will prove the most prolific of Michigan's fields thus far known.

ROCKY MOUNTAIN FIELDS

Southeastern New Mexico supplied the only features in the Rocky Mountain district. Two Lea County wildcats promise new pools. One is in section 8-21-38 and the other in section 24-17-34, and both are showing oil.

Completions in All Fields

(Week Ending March 13, 1937)

	Oil	Gas	Dry	Total	1937 total comp. to date	1936 total comp. to date
Penna. Grade Fields	78	24	12	114	729	556
Lima Field	0	0	0	0	14	12
Central Ohio	1	18	4	23	172	49
Indiana	0	1	0	1	27	31
Kentucky	0	0	0	0	25	38
Illinois	0	0	3	3	4	10
Michigan	13	1	4	18	155	140
Kansas	42	2	11	55	393	261
Oklahoma	39	3	15	57	907	448
Texas:						
North Central Texas	31	2	28	61	512	476
West Texas	41	2	10	53	474	234
Texas Panhandle	13	0	0	13	123	132
East Central Texas	13	0	4	17	130	48
East Texas	25	0	2	27	406	524
East Texas border	3	0	0	3	85	3
Gulf Coast Texas	24	0	7	31	242	207
Southwest Texas	32	0	14	46	636	464
Total Texas	182	4	65	251	2,608	2,088
North Louisiana	4	1	3	8	74	116
Gulf Coast Louisiana	5	0	3	8	90	68
Total Louisiana	9	1	6	16	164	184
Arkansas	0	0	0	0	18	20
Montana	0	0	0	0	15	20
Wyoming	1	0	1	2	17	16
Colorado	0	0	0	0	5	7
New Mexico	10	2	0	12	143	86
Utah	0	0	0	0	0	2
California	13	0	3	16	255	221
Total United States	388	56	124	568	5,251	4,189
Total previous week	363	42	110	515		
Difference	25	14	14	53		

Outstanding Fields—Highlights

(Week Ending March 13, 1937)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Anahuac	4	5	5	2,791	159	13,397
Hastings	3	8	4	1,711	147	12,110
Loma Novia	2	5	3	560	666	19,820
Seven Sisters	0	5	1	480	380	10,460
Saxet	5	32	5	800	399	31,870
Lopez	1	6	6	1,970	298	9,120
East Texas	36	106	25	970	22,305	458,700
Talco	16	32	11	2,341	238	22,500
OKLAHOMA						
Oklahoma City	2	22	0	0	1,098	141,750
Fitts	6	63	13	9,910	653	89,675
Burbank-So. Burbank	1	4	1	96	2,166	24,250
KANSAS						
Ellis County	4	20	0	0	80	5,000
Reno County	6	31	6	4,597	375	21,054
Russell County	10	55	10	12,952	607	25,465
Rice County	11	57	9	5,495	723	42,825
NEW MEXICO						
Lea County	18	95	9	3,087	2,017	100,970
LOUISIANA-TEXAS						
Rodessa, La.	5	15	2	567	352	46,604
Rodessa, Tex.	7	42	3	2,752	223	42,759
Gillis, La.	1	4	1	616	56	15,217
Tepetate, La.	1	3	0	0	41	5,737
MICHIGAN						
Porter-Yost	3	5	1	50	431	12,682
Crystal-Montcalm	4	5	0	0	149	2,342

Michigan Field Report

By
PAUL A. ELLIOTT

BUCKEYE POOL, IN GLADWIN COUNTY STARTS NEW BOOM

MUSKEGON, Mich., Mar. 15. — Michigan's greatest new production record in two years, and developments that marked the new Buckeye Township, Gladwin field, as possibly the greatest in the oil history of the state, brought the definite return of boom days last week.

Thirteen of the state's 18 completions were successful oil producers, five of them in Buckeye Township were rated good for a combined initial output of 7,950 bbls. Another in Beaverton Township increased Gladwin County's contribution to over 8,000 bbls.

Another 2,000 bbls. daily was added by three new wells in the Sherman Township, Isabella County field, while one in the Clayton Township, Arenac County pool, made 240 bbls. a day, one in Jasper Township, Midland County, 50 bbls. and two in Ogemaw County made 115 bbls.

The week's total of 10,535 bbls. of new oil production has not been equaled since the heyday of the Crystal Township, Montcalm County, field in 1935. In addition to the oil wells, one small gasser made 500,000 feet daily in the New Haven Township, Gratiot County, field and four dry holes were completed.

Buckeye—Gladwin

However, the Crystal-Montcalm field of two years ago was but a "flash in the pan" compared with the new Buckeye field for several reasons. In fact, there are factors which lead many Michigan operators to believe the Buckeye area may eventually outdistance the prolific Porter-Yost area of Midland County, which has produced more crude since it was opened in February, 1933, than all other Michigan fields combined.

While as yet no single producer in Buckeye has rivaled the record 15,000-bbl. well in the Porter field, nor even has equaled a score of 5,000 to 10,000-bbl. flush producers developed in the heart of the Midland County area, it is recognized that some of the 1,500 to 2,500-bbl. wells already hit in Buckeye have a great advantage over Porter in the fact that the Dundee pay sands are well above the water table.

In area, the Buckeye field may yet exceed Porter-Midland, as it is expected to be more than 5½ miles long and perhaps 2 or 3 miles wide, provided the northern area, now the most rapidly developing oil center in the state, and the southwestern corner of the township prove to be directly connected.

Muskegon Development Co. is expected to drill in a possible connecting well, No. 1 McMahan, SW SW NW section 25-18n-1w, this week, and it is being closely watched for indications of the future drilling trend.

Buckeye Completions

Five new completions in the Buckeye field last week boosted the estimated daily potential to 16,000 bbls., placing the new area in the undisputed lead among 17 oil-bearing areas of Michigan, although an accurate check will be impossible until next month.

Mammoth Producing & Refining Co. No. 1 Jakab, SE NE SE section 10, was rated good for 4,000 bbls. daily at a total of 3,631 feet, or 89 feet in the Dundee. It was drilled on a 40-acre lease for which the operators paid the Daily Crude Oil Co. more than $60,000.

Rex Oil & Gas Co. Friday brought in the second largest producer of the week, No. 1 State, SW NE SE section 11, which flowed 95 bbls. an hour and was rated good for about 2,300 bbls., flowing naturally, at 3,515 feet, about 60 feet below the first show of oil and gas encountered in the Dundee.

Wicklund Development Co. No. 4-A State, the discovery lease, made 1,500 bbls. initially at 3,630 feet.

Fortney Oil Co. No. 1 Miller, NE NE NE section 15, Buckeye, produced 110 bbls. initially at a considerable distance from the center of greatest output. Dundee was topped at 3,561 feet and two streaks of pay were encountered, one from 3,630 feet to 3,641 feet and the other from 3,667 feet to 3,673 feet.

Rowmor Corp. salvaged No. 1 State, NW NW NE section 36, near the southwest corner, an offset to the Oard discovery well, for about 40 bbls. a day as a possible edge well. Dundee was topped at 3,493 feet.

Beaverton—Gladwin

The Frank T. Schooneas, Trustee No. 1 Yager, SW NE NE section 36-17n-2w, Beaverton Township, Gladwin County, finally was completed for 180 bbls. a day near the Crigano discovery well which opened a second area in this township last fall. Dundee was topped at 3,786 feet and pay at 3,843 feet, the hole being drilled to a total depth of 3,851 feet before completion by acid treatment.

M. F. Whitehill, who opened the original Beaverton pool, struck a show at 3,898 feet in the No. 1 Rackel estate well, NE NE SW section 11, and was treating with acid before completion.

There were indications C. L. Maguire, Inc., No. 1 Foster Brothers test, SW NE SW section 15, Buckeye Township, might prove a dry hole. It had been drilled below 3,800 feet without a show of oil, gas or water.

Fifteen new permits were included on the latest Department of Conservation list for Gladwin County, 14 of them in Buckeye Township, and one for a wildcat in Billings Township, the H. E. Bell and Monroe Marks No. 1 J. W. Keyes, NW SW NW section 9-17n-1e. Five other permits included one for proved Clayton Township, Arenac County, section, three for Michigan Stray gas tests in New Haven Township, Gratiot County, and one for a similar gas test in Belvidere Township, Montcalm County, part of the Tri-Townships field.

I. J. Rees, electrical superintendent for E. H. Moore, Inc., in the Fitts field, Oklahoma

Sherman—Isabella

Of three wells in the Sherman Township, Isabella County, field, one of three most promising areas in Michigan this year as the result of discoveries of the past few month, the Pure Oil Co. No. 1 Baker, SE SE NW section 33-15n-6w, was the largest. It had a rated flow of about 1,500 bbls. daily, making 600 bbls. in 12 hours at a total depth of 3,677 feet.

Pure also brought in the No. 1 Leiter, NW NW NW section 34, same township, for 100 bbls. initially from the Monroe formation topped at 3,615 feet and drilled to 3,623 feet.

The Rowmor Corp. No. 1 Leiter, NE NE SW section 33, same township, made about 400 bbls. daily after being drilled only 3 feet into the Monroe sands topped at 3,644 feet.

Clayton—Arenac

The Devonian Oil Co. made the only completion in the Clayton Township, Arenac County, field last week when the No. 1 Crandell flowed 240 bbls. in 24 hours after acid treatment in the Dundee topped at 2,452 feet and drilled into the pay sands at 2,590 feet, or 140 feet in. It later settled to 170 bbls. daily.

Ogemaw County

Dunnigan and Fothergill made a 100-bbl. producer of their No. 1 Christman well, SE SE SE section 19-22n-2e, West Branch Township, Ogemaw County, after acid treatment.

W. J. Bernier also brought back the No. 1 Weiler, NE SE SW section 14-22n-1e, Ogemaw Township and county, formerly reported dry, to make 15 bbls. a day from the Dundee pay sands.

Midland County

Pure Oil Co. completed another Bond-Root well in Jasper Township, Midland County, No. 19, S half SW NE section 3-13n-2w. It made 50 bbls. initially from the Traverse formation at about 3,000 feet, and later probably will be drilled to the Dundee after being produced to capacity from the upper pay stratum, seldom a comfercial producer in this section of the state.

Gratiot County

The Wiser Oil Co. struck a light flow of about 500,000 feet daily of natural gas in the Michigan Stray sands at 1,004 feet in the No. 1 McKinstery and Plank, C NE SE section 5-10n-4w, New Haven Township, Gratiot County.

Talbot and Hutton completed their No. 1 Sharrar, NW NW NE section 23-11n-4w, a Sumner Township wildcat test, as a dry hole at 3,301 feet. Dundee was topped at 3,242 feet and water first encountered at 3,290 feet.

Dry Holes

T. F. Caldwell, Inc., also finished a "duster" in the No. 1 Chapple and others, SE NE SE section 21-16n-4w, Vernon Township, Isabella County, drilling into the Monroe to a total depth of 3,851

(Continued on Page 80)

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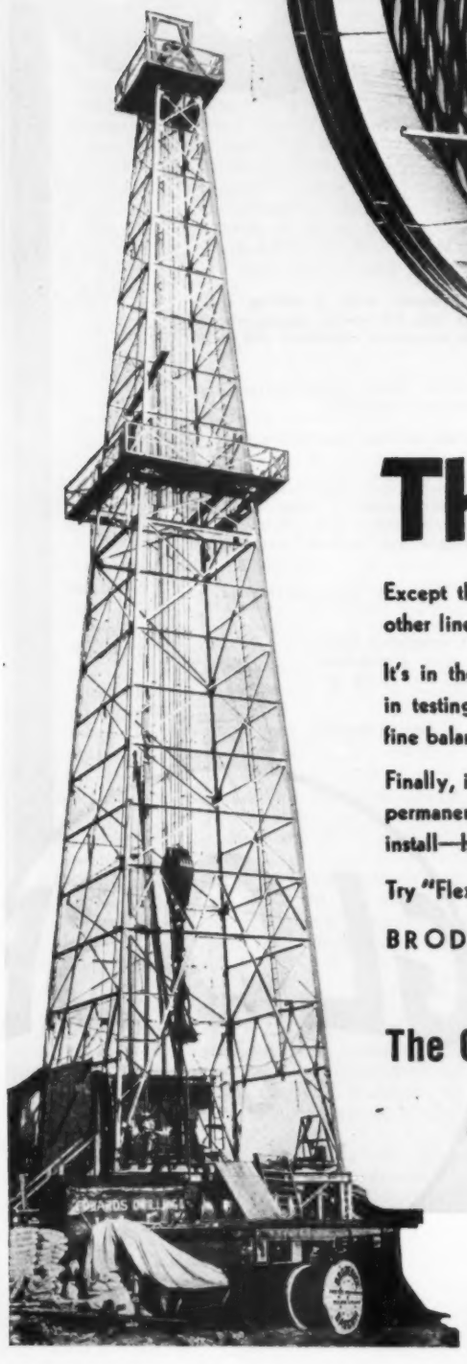

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Southwest Texas District

By
GEORGE WEBER

INCREASE IN DRILLING, POOL EXTENSIONS, NO NEW FIELDS

CORPUS CHRISTI, Tex., Mar. 15.—The smaller fields of Southwest Texas attracted the greater share of attention during a quiet week of drilling, as several entered their first stages of development, and others became increasingly active. Although the week was devoid of any outstanding discoveries or developments, drilling continued strong in all parts of the section. Minor extensions of producing areas in the West Premont field of Jim Wells County; the Sullivan field, Nueces County; White Point field, San Patricio County, and the Colmena field, Duval County, were noted, attending an increase in drilling in nearly all of the pools, particularly West Premont and Colmena.

The prospective new field for Nueces County was not opened as expected during the week, but attempts are continuing, and operators hope for a good completion. The wildcat, Seaboard Oil Co. and Allen No. 2 Chapman, located southwest of Corpus Christi, after recovering 1,080 feet of pipe line oil at 6,462-71 feet, set casing at 6,570 feet and perforated casing at 6,464-83½ feet. The well came in making oil and salt water, after flowing for a short time, the salt water content increased until the flow ceased. It is believed, however, that the salt water is showing as a result of a poor cement job, and operators have recemented perforations with a squeeze job, and will attempt completion again in the sand.

North and east, the new London field in Nueces County was also the center of attention, as Cosner & Cosner tested sand at 4,703-19 feet. The sand, corresponding to that producing in the discovery well, showed 200 feet of oily mud with gas in seven minutes at a working pressure of 10 pounds. Operators will proceed after a packer lost in the hole is recovered. The Cosner test, located in a southwest diagonal offset location to the discovery well, Wellington Oil Co. No. 1 Stockton, is the first to be drilled since the field was opened late in January. Other tests are beginning, however, and the field will attract considerable attention for the next few weeks. The Crown Central Petroleum Corp., newcomers to Nueces County operations, have acquired acreage west of discovery where its No. 1 is located, and the Gem Oil Co. will drill on its acreage offsetting the Wellington well on the south.

To the northwest, and in the same county, Invincible Oil Co. has extended the Sullivan field a short distance. Invincible No. 1 Elliff is several locations west of the Texon test, which have both blown out and cratered. The newest producer in the field is making an approximate 6 bbls. of distillate per hour through a one-half inch choke with a tubing pressure of 1,650 pounds and a casing pressure of 2,100 pounds. Casing was perforated at 6,410-20 feet. The operators will move over on No. 1-B Elliff for a second test.

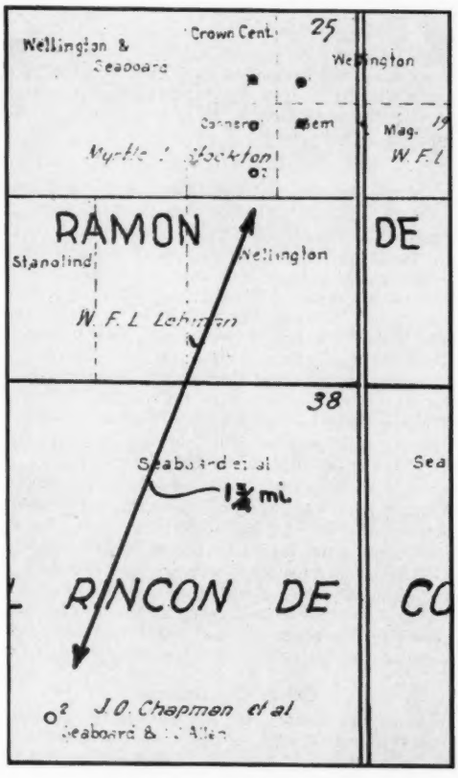
Saxet Field

Greatest activity in the county, and in all of Southwest Texas still centers in the Saxet field. There during the past week, five oil wells were brought in, and two tests were abandoned. Among the completions were two wells in the 6,700-foot sand, and one in the 6,300-foot sand, horizons which are receiving considerable attention. The Clarkwood sands were defined to the south and west by the failure of the R. B. Bryant No. 1 Gallagher, abandoned at 5,004 feet.

The two principal fields of San Patricio County, Plymouth and Taft, are gaining in activity, particularly Plymouth, with five tests now active. Taft received somewhat of a setback during the week, as W. B. Craig No. 1 Drainage Ditch, which for a time showed possibilities of extending production considerably westward, was abandoned at a total depth of 5,020 feet. The wildcat had a show of oil in the 4,900-foot sand producing in Taft, but was unable to make a producer.

McCampbell

On the east edge of San Patricio County, and extending over into Aransas County, the McCampbell field is becoming another very active drilling area. Operations of the Atlantic Refining Co. and Buckingham Oil Co., joint holders of the field acreage, account for an average of more than one completion per week in the sand at 6,540 feet. In Aransas County near Lamar, Barnsdall Oil Co. is drilling below 4,600 feet on No. 2 Kate Edwards,



The new London field, Nueces County, is due for its first appreciable development. Crown Central Petroleum Corp. and Gem Oil Co. have staked tests, and Cosner & Cosner are drilling in a southwest diagonal location. Located 1¾ miles to the southwest, the Seaboard No. 2 Chapman is attempting completion, to open another producing field in the county.—(Porter Reginold, Maps, Corpus Christi)

offset to No. 1 which blew out several weeks ago, made gas, then some oil and finally salt water before subsiding.

In the old White Point gas field, Crown Central Petroleum Corp. completed No. 1 White Point Development for a small producer making 5 bbls. oil per hour and 45 bbls. salt water per hour. The Crown Central well is the second to be completed for a small oiler at White Point. It is bottomed at 4,905 feet.

Another small field which recently has advanced to the front in drilling activity is West Premont, in Jim Wells County. There, Tom Graham, discoverer of the field, has several rigs active, and completed three good wells over the past week. The three producers, No. 2 Johnson, No. 1 Seeligson and No. 1-A Singer were brought in through perforations at about 2,250 feet. They average 140 bbls. per day production.

Laredo District

Duval County led the Laredo district in new developments. In the newly discovered deep Sweden field southwest of Benavides, the Hiawatha Oil & Gas Co. is testing No. 1 Miller, an offset to the discovery well of the field.

On a four-minute drill stem test made at 5,868-87 feet, 480 feet of gas-cut mud with an odor of oil was recovered before the seat slipped. Operators are planning to run another test. The sand is the same as that producing in No. 1 Southland Life Insurance Co. of which it is an east offset. A Schlumberger survey of No. 1 Miller indicated oil sand at 5,869-87 feet. The No. 1 Herberger, Hiawatha's other active test in the field, is drilling below 5,000 feet in a south offset position to the discovery well. The outcome of these two tests is being watched with great interest by Southwest Texas operators, as the Sweden field is the first deep production to be opened in the Laredo district. It is believed that it presages the discovery of another trend of fields paralleling the Mirando City and Government Wells areas, opening possible deep shoreline producing sands. Others consider the field a deep-seated salt dome.

A Duval County salt dome field is receiving additional attention as new tests begin drilling in the Palangana field southwest of San Diego. Penn Palangana Oil Co. is beginning a test in Survey 250, and Frank Gravis has rigged up on No. 2-A Schallert in Survey 255.

Several new locations staked in the Colmena field east of Lopez in Duval County point to continued activity in that area for several weeks. The Wellington Oil Co. and Conservative Oil Co. have been drilling for some time bringing in a number of producers, and Hooper Rutherford, Inc. has announced four locations bringing the total for the week to 10.

In the Rio Grande Valley, Starr County leads at present in volume of drilling, with several shallow tests under way. The eastern counties of Hidalgo, Willacy and Cameron are the scenes of deep drilling, with wildcats and field tests drilling on contracts varying from 5,000 to 8,000 feet. The La Blanca field in Hidalgo County will hold the valley attention during the coming week, as Gulf States Oil Co. No. 3 Engleman tests sands at 8,004-86 feet, and the Sterling Oil & Refining Co. No. 1 Engleman approaches critical depth.

The Fault Line zone drilling boom centering around the Webster-Branyon area of Caldwell County and the Darst Creek field of Guadalupe County, continues, with several tests in the chalk and attempting completion. The Branyon activity is being accelerated by the opening of large producers in the chalk topped at 2,000 to 2,100 feet.

El Paso Natural

Report of El Paso Natural Gas Co. and subsidiaries for the year ended December 31, 1936, shows a net income of $1,071,828, and after federal income taxes, provision for retirements, interest, amortization, etc., equal after dividend requirements on 14,797 shares of 7 per cent preferred stock, to $1.76 a share (par $3) on 548,679 shares of common stock.

Eastern Field Report

By STAFF CORRESPONDENT

BEAVER COUNTY, PENNA., TO BE GIVEN AN ORISKANY TEST

PITTSBURGH, Pa., Mar. 15.—Another deep test is starting in southwest Pennsylvania. On the Minnie Weigle heirs farm in South Beaver Township, Beaver County, John T. Galey and others are building a rig for a test which is scheduled for the Oriskany sand. It is located 1 1/5 miles east of their Oriskany gas well on the Charlotte R. Calvin (William Graham) farm in the same township. North of this test, A. J. Wise, Jr. and others reached 1,400 feet in a deep test on the Beaver Falls Airport Corp. lease and shut down to change engines.

SOUTHEAST OHIO

Kachelmacher Estate No. 17 on the Hemlock Coal Co. lease in section 30, Monroe Township, Perry County, Ohio, was completed in the Clinton sand at 3,640 feet and produced 60 bbls. the first day after shot.

In Athens County, the Moore Farm Oil & Gas Co. completed a 2-bbl. well on the Fred S. Moore farm at New Marshfield in Fraction 1, Waterloo Township, in the Berea sand at 1,174 feet. In section 35, Dover Township, the Chartiers Oil Co. drilled a dry hole on the Eileen Stratton farm through the Clinton sand to 3,613 feet.

In Belmont County, John L. Gillingham completed No. 81 Sarah Lee, in section 2, Wheeling Township, in the Second Cow Run sand at 774 feet. It is a gas well gauging 150,000 feet a day. In the SW quarter of section 26, Richland Township, the Natural Gas Co. of West Virginia completed 165,000-foot gasser on the Albert Smelko farm in Berea sand at 1,767 feet.

In Hocking County, Joseph Thomas completed No. 2 M. Acker heirs, in section 6, Ward Township, in Clinton sand at 3,540 feet. It produced 15 bbls. the first day after shot.

In Monroe County, Fred Bowman and others completed No. 2 Rachel Wilson in section 10, Grandview Township in the Cow Run sand at a depth of 707 feet, a 1-bbl. well. It had not been shot.

In Morgan County, 2 miles east of Chesterhill, W. E. Burns and others completed a test on the William Croston farm in section 2, Marion Township, in Second Cow Run sand at 858 feet. It is a 240,000-foot gas well.

In Muskingum County, the Mid-East Gas Co. drilled No. 3 S. B. Bowman, in section 30, Wayne Township, in Clinton sand at 3,810 feet. It is a small gas well and may be drilled to the Medina.

SOUTHWEST PENNSYLVANIA

In Turner County, Pennsylvania, Turner and Wahl completed a test on the W. S. Waldron farm in Forward Township, in the Hundred Foot sand at a depth of 1,310 feet. It is a 2-bbl. pumper.

In Greene County, the Philadelphia Oil Co. No. 6 Maria Jacobs and others (Brooks) farm in Washington Township, is a small oil well in the Fifty Foot sand at 3,046 feet.

In Beaver County, Freshwater and Reed on the Walter Laughlin farm in Green Township, drilled through Berea sand and got a dry hole. In Economy Township, Black Brothers and McKibbin are drilling in the Hundred Foot sand in No. 8 on the H. L. McKibbin farm.

In Greene County, B. L. Frye on the Milton Martin farm in Aleppo Township, completed a gas well in the Injun sand, which started at 380,000 feet per day at 2,290-2,320 feet. In Richhill Township, Smith McCracken drilled a dry hole on the Willis A. Campbell farm through the Gordon Stray sand to 3,469 feet.

In Washington County, two tests on the Fifth sand streak were dry. In Amwell Township, Perrin & Co. drilled on the B. A. Bonham (Clarrisa Ramsey) through the Fifth sand to 2,912 feet without pay. In South Franklin Township, Bloom and others drilled a failure on the Clyde Hinerman farm to 2,948 feet, through the Fifth sand.

In South Strabane Township, Washington County, W. H. Davis & Co. No. 10 W. H. Davis drilled to 3,097 feet and is a small gas well from the Fifth sand. In Mount Pleasant Township, the Peystone Gas Co. completed a small gasser on the Lawrence Cowden farm in the Big Injun sand at 1,400 feet.

In Robinson Township, Washington County, North Star Oil & Gas Co.'s test on the Martin Perchine farm, in Salt sand at a depth of 910 feet, is a small gas well, gauging 75,000 feet a day. In Hanover Township, the Tri-State Oil & Gas Co. on the Samuel McCreight farm completed a gas well in the gas sand at 941 feet. It gauges 33,000 feet a day with a rock pressure of 43 pounds.

Deep Tests

In the deep test of the American Natural Gas Co. and the T. W. Phillips Gas & Oil Co. on the Perry S. Davis farm south of Prospect in Franklin Township, Butler County, the tools were not recovered. Due to a line cut, the casing (1,556 feet of 8¼-inch) collapsed and filled the hole with water. The casing was recovered and the hole bailed out but it was found that there is about 150 feet of caving on top of the tools.

In the test of the Laughner Oil & Gas Co. and the American Natural Gas Co. on the William Wilsman farm in Independence Township, Beaver County, work is progressing slowly. The depth is 5,159 feet or 22 feet in the Corniferous lime.

In South Union Township, Fayette County, William Snee and others are cleaning out cement in the test on the Summit Hotel property on Chestnut Ridge after setting casing (Halliburton) to 6,100 feet. The tools are working at 6,000 feet.

The deep test of Norwood Johnston and others on the James McBurney farm in Mount Pleasant Township, Washington County, was shut down for a change in equipment after reaching 6,038 feet.

Other Operations

In Greene County, the second test of the Carnegie Natural Gas Co. on the J. W. Milliken farm in Center Township reached the Nineveh Thirty Foot sand and at 27 feet in the sand there is about 2,000 feet of fluid in the hole and it has the appearance of a good producer. In Dunkard Township, this company is drilling at 2,438 feet on the Ella B. Parker farm and 1,825 feet on the Dale Brand farm. In Cumberland Township, this company is building a rig for a test on the S. N. Titus farm. In Jefferson Township, Fayette County, same company is rigging up the second test on the George J. Elliott farm and in South Franklin Township, Washington County, is down 831 feet in a second test on the C. T. Dodd farm.

In Springhill Township, Greene County, the Penn Ohio Oil & Gas Co. is deepening No. 2 H. H. Milliken and is drilling at 2,334 feet. The Union Gasoline & Oil Corp. is down 400 feet in No. 7 Lloyd Strope. Null and Moorhead are fishing for the tools at 1,755 feet on the John Barger farm. The Northeastern Oil & Gas Co. has reached 1,400 feet on the J. W. McNichols farm test.

In Morris Township, Washington County, the Manufacturers Light & Heat Co. is drilling at 950 feet on the W. E. Craft farm. In Peters Township, R. M. Duden and others have reached 350 feet on the McDowell heirs farm. Henderson and others are drilling at 1,100 feet on the James Bell farm. In Somerset Township, Victor Behm and others are down 2,835 feet on the Hosack farm. The Fifth sand was at 2,683 feet to 2,692 feet with 212,000 feet of gas at 2,686 feet.

WEST VIRGINIA

Three small producers were completed in West Virginia during the week. In Marshall County, the Greenfield Oil & Gas Co. completed a test on the Roxie Neely (H. B. Mason farm) in Liberty district at a depth of 2,950 feet, the Gordon sand. It is showing for 3 bbls. a day and may not be put to producing.

In Boone County, the Pure Oil Co. completed No. 42 on the Lafollette, Robson and Prichard lease in Sherman district at a depth of 3,113 feet. The Big Line was at 2,404-2,614 feet; Big Injun 2,614-50 feet; Weir 2,701-2,914 feet and the Berea sand showing 4 bbls. a day.

In Calhoun County, the Richter Oil Co. completed No. 3 on the Emily McCray farm in Sheridan district in the Salt sand at a depth of 1,058 feet. It is good for 1 bbl. a day.

Oriskany Gas Field

In Poca district, Kanawha County, West Virginia, the test of the Mullins Gas Co. on the J. F. Corke farm is showing about 2,000,000 feet a day with the tools in the Oriskany sand at 4,911 feet. The top of the Corniferous lime was 4,766 feet. This extends the pool a half mile southwest of the Facemyer gas well which was also a good gas well. The test a half mile more to the southwest on the Elmer Thaxton farm has been spudded in.

In Elk district, Kanawha County, the Columbian Carbon Co. completed the test on the Susan I. Given farm at 5,193 feet, Oriskany sand. The gauge is 786,000 feet a day.

Several locations were made in the field during the past week, one considerably to the west. In Poca district, about 2½ miles west of the Oriskany gas well on the W. P. Moss farm and about three-quarters of a mile south of Sissonville, Godfrey L. Cabot, Inc. has made a location on the J. E. and M. D. Good farm.

In Elk district, Kanawha County, the Columbian Carbon Co. has made a location on the John Summers farm 1,600 feet north of the United Fuel Gas Co.'s test on the Henry A. Walker farm. The elevation is 954 feet. Same company has made a location on the R. L. Wolf farm 1,500 feet north of the G. W. Wolf well, in the Elk district.

In Malden district, Kanawha County, in the Campbell Creek field, the South Penn Oil Co. has made a location for No. 4 Kate C. Scott, about halfway between Nos. 1 and 2 wells. The elevation is 1,263.53 feet.

In Elk district, Benedum & Trees reached the top of the Corniferous lime at 4,801 feet in the test on the Mary Slack farm south of the Mary Wingfield farm. Their test on the T. W. Walls and others lease is drilling at 2,005 feet.

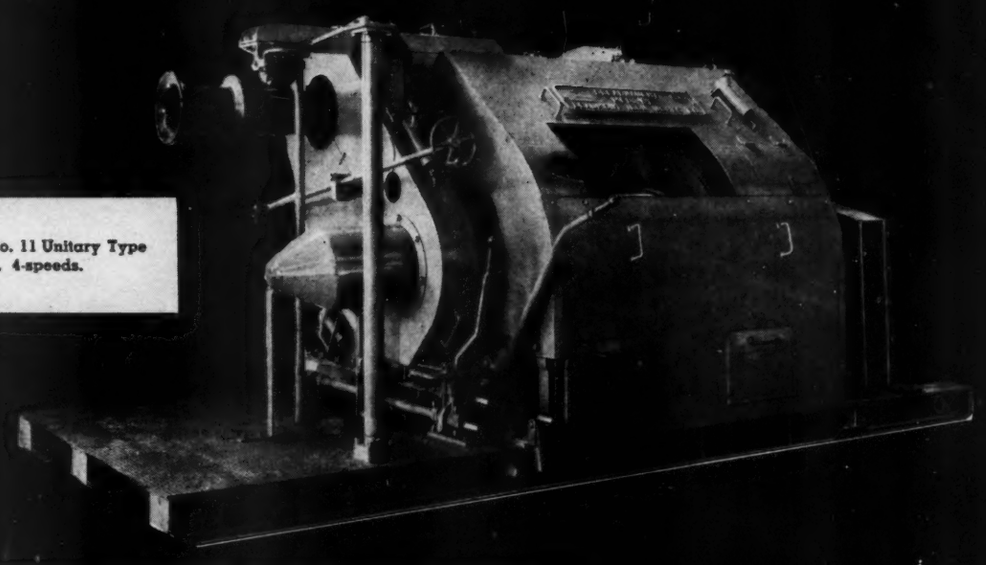
Gas Wells

In Boone County, Owens-Illinois Glass Co. completed No. 20 Allen and Pryor farm, Scott district at 1,860 feet, as a gas well gauging 128,000 feet a day.

In Cabell County, R. H. Adkins and others completed a test on the W. L. and Jennie Adkins

(Continued on Page 80)

A trio of DREADNAUGHTS that can be beat!



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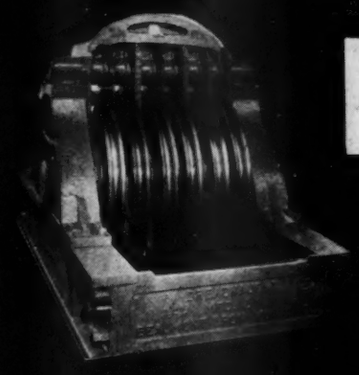

● DREADNAUGHT Type "KY" Straight Line Drilling Crown Block. 5 or 6 Sheaves, 300-, 360-ton Capacity.

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North Louisiana, Arkansas

LODI WELL FLOWS 303 BBLS. IN INITIAL TEST OF 12 HOURS

By MITCHELL TUCKER

SHREVEPORT, La., Mar. 15.—The testing of Arkansas-Louisiana Gas Co. No. 1 W. S. Ford, discovery well at Lodi 5 miles southwest of outpost production in the Rodessa field, and about 7 miles northeast of the recent Jefferson discovery field, controlled attention during an otherwise busy period last week. Twenty-two new locations were made in the Rodessa field proper on proven or semiproven acreage.

Total depth of the Arkansas Louisiana Gas Co. No. 1 W. S. Ford at Lodi is now 6,181 feet. Hill sand was drilled from 5,976 feet to 6,004 feet and saturated Gloyd sand at 6,100-6,157 feet. The 7-inch casing was perforated with 36 shots at 6,110-20 feet and good shows of oil were noted. Casing was again perforated at 6,107-22 feet with 47 shots and hole filled about 2,000 feet with oil. After acidizing with 3,000 gallons well began flowing steadily at the initial rate of 60 bbls. hourly, and flowed 303 bbls. during first actual test in 12 hours through one-half inch tubing choke, with 500,000 feet of gas. The well settled down to about 25 bbls. per hour through three-fourth inch tubing choke, tubing pressure 280 pounds, gravity 38.6. After flowing for some hours it has a tendency to clog up with drilling mud, and swabbing is necessary to bring it back on production. Testing continues at this important discovery, which indicates a possible production area from the Cass-Marion County line to Jefferson, a distance of about 12 miles.

The Jefferson discovery well is still considered in the testing state. Holcomb & Thomason, Flesh & Hootkins No. 1 Lissie Henderson, R. Bennington Survey, 3 miles north of Jefferson, is now producing about 150 to 200 bbls. daily by swabbing and flowing. Flow valves have been installed in an effort to stabilize the flow. It is planned to either acidize the present level or perforate above the present level.

Much remains to be learned about the extensive Marion County territory, but it was established last week that the fault feature runs through the southern tip of the A. D. S. Coy Survey, for the Dauman, Dunn & Fisher No. 1 Chatten, SE corner of that survey, topped all markers to the red beds very low and cut back onto the up-throw side of the fault from 3,600-3,700 feet.

North Rodessa

The first Arkansas location in the North Rodessa area was announced last week by William Monroe Layton and others on the E. A. Rector tract in section 17-20-28, extreme southwestern corner of the state, Miller County.

Another new location and new completion was made in the North Rodessa area last week. Standard Oil Co. No. 1 Emma J. Parker, NE SE NW section 9-23-16, flowed on a 12-hour test at the rate of 367 bbls. daily through 21/64-inch tubing choke, tubing pressure 150 pounds, casing pressure 400 pounds, total depth 6,013 feet.

Rodessa Completions

R. W. Norton No. 3 Starke, section 16-23-16, flowed 36 bbls. in four hours on initial test, one-fourth tubing choke, casing pressure 1,200 pounds, tubing pressure 450 pounds, total depth 5,994 feet.

Magnolia Petroleum Co. No. 7 L. Haywood, P. Evans Survey, flowed 431 bbls. of oil in 24 hours through one-fourth inch tubing choke, tubing pressure 570 pounds, casing pressure 750 pounds, total depth 5,955 feet.

Magnolia Petroleum Co. No. 2 Lewis and Wicks, Cass County School Land Survey, flowed 521 bbls. in 24 hours through one-fourth inch tubing choke, tubing pressure 775 pounds, casing pressure 310 pounds, total depth 6,132 feet.

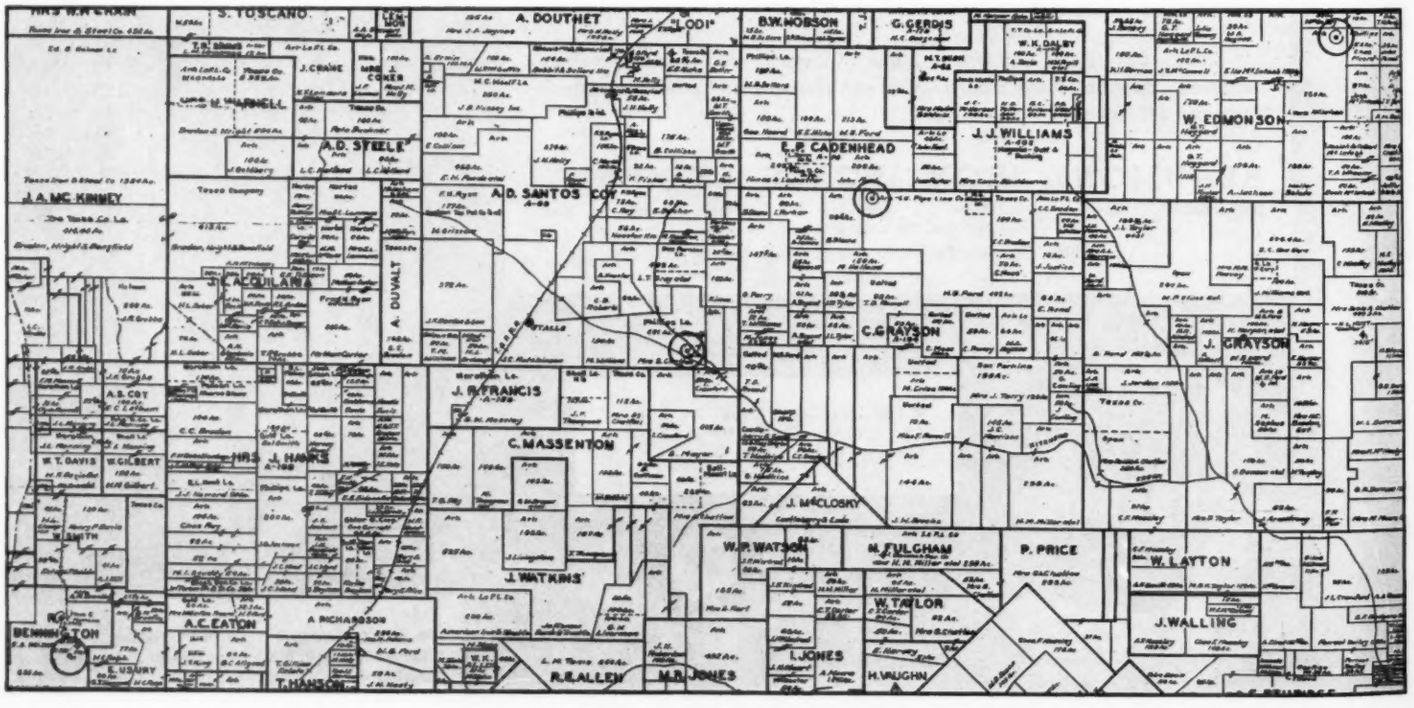
The Texas Co. No. 6 N. A. Rambo, Cass County, School Land Survey, flowed at the rate of 75 bbls. hourly on initial test, one-fourth inch tubing choke, tubing pressure 450 pounds, casing pressure 250 pounds, total depth 6,055 feet.

Bienville Parish

Seaboard No. 1 McGee, section 3-16-6, in the Bearcreek area, Bienville Parish, established another new gas reserve in North Louisiana by perforating and testing the Basal Glen Rose at about 6,665 feet and obtaining a 50,000,000-foot gasser with rock pressure 2,200 pounds. Formerly this well indicated itself good for 70,000,000 feet in the Travis Peak at 7,323-7,462 feet, but operators plugged back to testing the upper section before making decision as to where to complete this discoverer of the two new gas levels of North Louisiana.

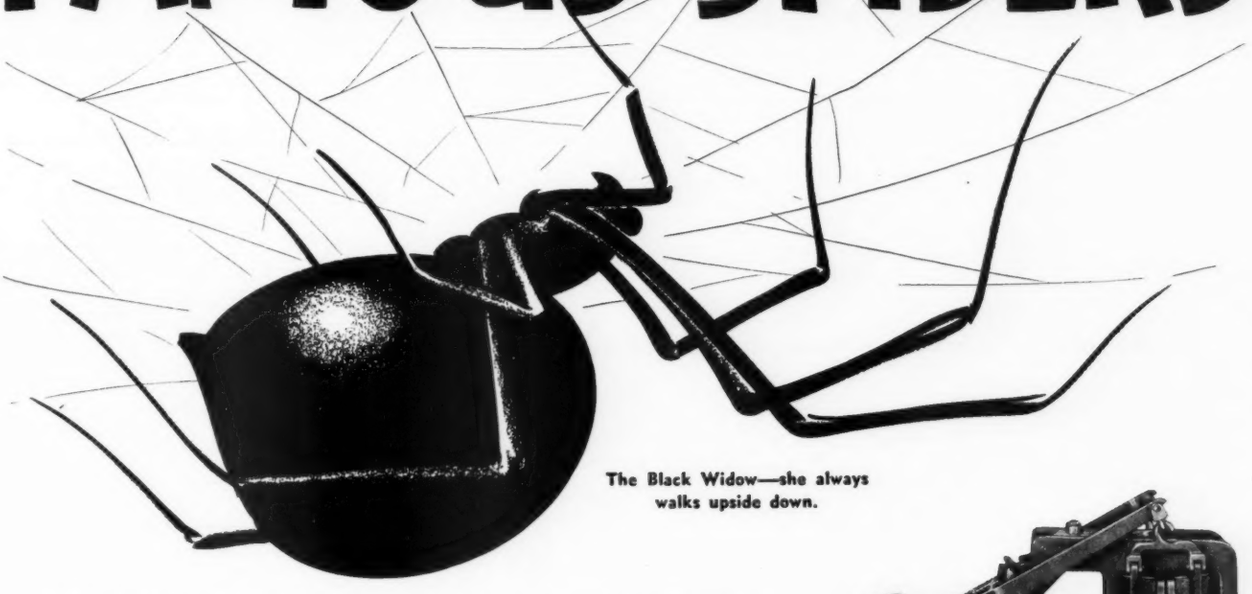
Bossier Parish

The Louisiana Department of Conservation released the expected order on the Sligo oil and gas field last week, which placed the provisions of the order in effect March 5. Allowable oil production is allocated among the wells of the field on the basis of 75 per cent acreage and 25 per cent bottom-hole pressure, with the gas limit factor set at 2,000 to 1. The order provides that not more than 40 acres may be nominated for the acreage factor for any one well. With regard to well spacing, "a permit for but one location shall be granted on a tract of 40 acres or less, which location shall as nearly as practicably be in the



Twelve-mile extension area from southwest Rodessa oil wells to Jefferson, Tex., which has been thrown open for exploration and development due to recent Jefferson discovery, and Arkansas Louisiana Gas Co.'s Lodi discovery at about the midpoint, known as No. 1 W. S. Ford, Charles Grayson Survey. Circled points indicate the four wells either drilling or testing throughout this 12-mile area

FAMOUS SPIDERS



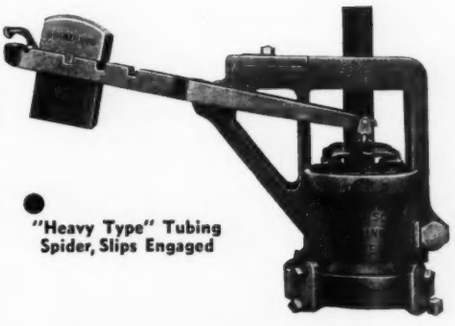
The Black Widow—she always walks upside down.

The Black Widow is the world's deadliest spider. One prick of her tiny fangs brings agonizing pain and death to one person out of every twenty bitten. The Black Widow spider is "famous" only because she is so *dangerous*. On the other hand, the GUIBERSON Spider is famous because it is *absolutely safe!*

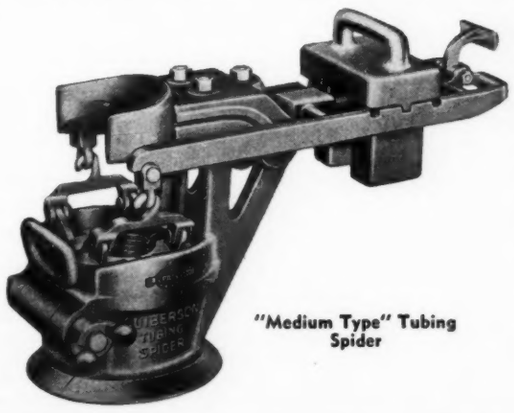
The GUIBERSON Tubing Spider incorporates several patented features which protect men and equipment, and insure maximum efficiency. Its adjustable Guide Head corrects "tubing drag" that occurs in practically all wells, as a result of tubing hanging off center and dragging against one side of the hole. This source of danger and difficulty in handling slips is eliminated by the Guide Head which automatically guides tubing to the exact center of the spider's bore. Slips seat accurately, without forcing.

The GUIBERSON Spider has a weighted lever which permits safe, semi-automatic handling of the slips. Running in, the weight can be set so that slips are retracted and out of way. Coming out, weight can be set so that slips are either retracted, or balanced so that they ride the tubing automatically. Standing a safe distance from the tubing, the workman operates the slips quickly and accurately with the lever handle. He does not have to bend over the spider or place his hands near the slips, and thus avoids accidents.

"Heavy Type" Tubing Spider, Slips Retracted



"Heavy Type" Tubing Spider, Slips Engaged



"Medium Type" Tubing Spider

Other advantages of the Spider are: (1) Lever lock which holds handle in raised position and slips in bowl, preventing them from being thrown from bowl should tubing rebound; (2) Quick installation or removal of Spider by removing bolt and gate; (3) All parts readily accessible and difficult to foul; (4) Spider will operate when practically covered with paraffin.

The GUIBERSON Tubing Spider is built in two types: "Heavy" and "Medium." See your supply store, write for bulletin, or

See GUIBERSON Section, 1937 Composite Catalog.

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GUIBERSON

BETTER BE SAFE THAN SORRY

center of the tract." Three oil wells have been completed in the Sligo oil field, on the southwestern flank of the old gas area, all of which are owned by United Gas Public Service Co.

Louisiana Petroleum Corp. No. 1 Edward Estate, NW SW center section 5-17-11, proved Basal Glen Rose (Pettit) production on the northeastern flank of the Sligo field through the completion of a 70,000,000 to 90,000,000-foot gasser, carrying large quantities of distillate. A gasser at this point on the northeastern flank is thought to indicate that any possible oil on that side of the structure must be further off flank, and additional tests are expected here on the 9,000-acre block controlled by this company.

United Gas No. 1-H A. C. Skannal, NE SE section 26-17-12, in the oil producing area of Sligo, showed for a good well after an acid charge in the Basal Glen Rose. It flowed 210 bbls. in the first 21 hours, total depth 5,144 feet.

United Gas No. 1 H. G. Freeman, SE section 15-17-12, was completed as a 20,000,000-foot gas well in the Sligo field, total depth 4,380 feet. It had been drilled to 5,166 feet in search of oil in Basal Glen Rose, which tested salt water, and was plugged back to the gas level.

Caddo Parish

W. J. Hunter, of Shreveport, staked location for a deep and interesting test in the Spring Ridge area, No. 1 Stoer, SW NE section 10-15-15, about 12 miles southwest of Shreveport. It is on an extensive block assembled last year. The Rodessa Glen Rose series is the objective.

W. D. Chew No. 3 U. S. Government, NW section 5-20-15, on the flank of the Caddo field, found salt water only in shallow sand and was abandoned at 956 feet.

Gulf Refining Co. No. 1 E. P. Hatcher, SW SE section 11-17-15, important Cross Lake test south of Shreveport, is drilling at 8,997 feet after electrically surveying hole at 8,994 feet last week.

Morefield & Prine No. 3 Stockeley, section 5-20-15, Caddo field, was completed. It produced 5 bbls. oil and 25 bbls. salt water initially, total depth 957 feet.

Stanolind Oil & Gas Co. No. 117 Dillon, NE SE section 14-21-15, Pine Island field, pumped 50 bbls. oil daily on initial test, total depth 1,683 feet, after acidizing.

Simplex Oil Co. No. 10-A Youree, was completed as a gas well, gauging 500,000 feet, total depth 1,888 feet.

Rig and material is being moved in for the deepening of the Caspania deep test temporarily abandoned last summer. Prairie River Syndicate No. 1 Hutchinson, SW NW section 15-15-12, total depth 7,377 feet, is to be deepened through the Lower Marine section of Travis Peak.

Estimated Daily Production

Estimated daily gross production for all companies for the week ending March 12, follows:

NORTH LOUISIANA

Bellevue	765
Caddo light	4,150
Caddo heavy	2,395
Converse	765
Cotton Valley heavy	265
Cotton Valley light	535
DeSoto and Red River	1,375
Elm Grove	360
Haynesville	3,450
Holly	135
Homer	2,525
*Lisbon	125
Pleasant Hill	145
Rodessa	46,605
Sarepta-Carterville	345
Sligo	275
Urania	2,815
Zwolle	675
Total	67,580

SOUTH ARKANSAS

Champagnolle	1,595
El Dorado	2,000
Lisbon	285
Miller County	505
Nevada	765
Smackover light	2,105
Smackover heavy	16,855
Stephens	560
Troy	555
Urbana	1,425
Total	26,650

Texas side of Rodessa field, 42,755 bbls. daily.

*One well in section 1-20n-5w, Claiborne Parish, La. Black oil, 33 to 34 gravity.

Claiborne Parish

Plans to deepen Max Hirsch and others No. 1 C. O. Ferguson, SW corner section 29-22-6w, did not materialize, and the test has been abandoned as dry at 6,147 feet.

United Gas and others No. 1 W. Brown, section 1-19-6, old well drilling deeper in Sugar Creek field, made a drill stem test at 5,600-5,839 feet and reported three joints of salt water and showing of gas. This well will be drilled deeper.

DeSoto Parish

L. S. Fite No. 1 Ramsey, section 36-11-11, DeSoto Parish, has been abandoned as dry in black shale, total depth 3,027 feet.

Richland Parish

Gulf Refining Co. No. 15 R. R. Rhymes, section 32-17-6e, Richland Parish, a deep test in the Richland gas field, where this company holds extensive oil rights, topped a definite lime formation last week at 9,681 feet and continues to drill at 9,720 feet.

Webster Parish

After drilling to total depth of 7,202 feet, Standard Oil Co. of Louisiana set 7-inch casing at 5,790 feet in No. 1 Fudicker, NW section 2-17-9w, Sibley gas and distillate area, and came up the hole and perforated casing at 4,616-31 feet with 48 shots, opposite a porous zone indicated by an electrical survey. Only salt water was obtained on the test at this level, and a squeeze job is being placed on the formation at this point in preparation to complete in the Lower Glen Rose level, known to be highly saturated with gas and distillate.

Ohio Oil Co. indicated a new gas zone in the Cotton Valley field, now known to produce from seven levels, when its No. 2 Gray, section 26-21-10, showed about 25,000,000 feet of dry gas on a test in sand at 5,521-40 feet, total depth.

The fourth gasser in the Lower Marine zone at Cotton Valley was added when United Gas No. 1 Davis, NW NW section 23-21-10, total depth 8,555

Know

YOUR SLUSH PUMP PRESSURES

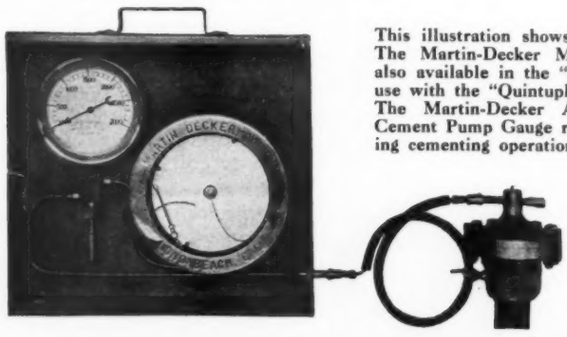
for

today's drilling & tomorrow's reference

The driller *knows* Slush Pump pressures when he is using the Martin-Decker Non-Clog Slush Pump Gauge, because he can *see* the pressure. By the same token he can *see* a hole in the drill pipe, pumped out tool joints, the condition of the pump valves and pistons. In fact, he *sees* a complete, dependable picture of the entire mud circulating system.

The engineer *knows* Slush Pump pressures, too, when the rig is equipped with Martin-Decker Non-Clog Slush Pump Gauge, because he can *read* them from the charts taken from each day's drilling record. He *reads* equipment breakdown such as drill pipe "twist-offs", failures of hose, fittings, pumps, pump parts, etc. He can definitely check equipment performance.

The operator *profits* because equipment failures are lessened by virtue of the information furnished by the Mud Pump Gauge.



This illustration shows the individual unit. The Martin-Decker Mud Pump Gauge is also available in the "Quintuplex" type for use with the "Quintuplex" Drilling Control. The Martin-Decker Automatic Recording Cement Pump Gauge records pressures during cementing operations.

THE WEIGHT INDICATOR

MARTIN-DECKER CORPORATION

LONG BEACH CALIFORNIA

San Joaquin Valley: A. F. McQUISTON, Bakersfield, California

Mid-Continent Distributor: REED ROLLER BIT COMPANY, Houston, Texas

feet, tested 10,000,000 feet of gas and a spray of distillate through one-fourth inch tubing choke, rock pressure 3,500 pounds.

ARKANSAS

Nevada County

Benedum & Trees No. 1 Block, NE NE SE section 9-14-20, deep test of the recently discovered Troy field, cored and drilled to 5,012 feet last week, and showings of oil were reported from 4,990 feet to 5,012 feet. The hole is now standing for orders.

EAST TEXAS (Border Counties)

McAlester Fuel Oil Co. is due to start operations soon on its block of acreage 2 miles northwest of Douglasville, Cass County, Texas, a few miles north of the Rodessa field. The test is tentatively placed on the Dale Brown tract in Calloway Davis Survey. Objective will be the Lower Glen Rose horizons.

ALABAMA

The proposed 8,000-foot test on the Hatchetigbee Anticline, Choctaw County, known as Joe Modisett and others No. 1 McCorvey, SW SW section 20-9n-2w, is preparing to set surface casing and completing rigging up.

MISSISSIPPI

T. J. P. Wemple, Trustee (North Central Texas Oil Co.), No. 1 Southern Forest Land, SW SW section 29-4n-2e, generally referred to as the southwest Mississippi "Conroe Trend" test in Amite County, set 10-inch casing at 847 feet, and preparations are now being made to drill ahead.

In Lamar County, 3,000 feet southwest of the recently uncovered salt dome, Sun Oil Co. and others No. 1 Talley, section 28-4-15, is drilling ahead after setting surface pipe last week.

"PETROLEUM PRODUCTION"

Wilbur F. Cloud, professor of petroleum engineering at the University of Oklahoma, has published a book entitled "Petroleum Production," which is intended to serve as a general reference work for executives and practical production engineers. It treats of the legal phases of petroleum production, oil sands and production relations, field development, power and prime movers, completions, flowing wells, air-gas lift, pumping problems, surface and underground; cleaning and reconditioning; repressuring; gathering, storing and gauging; field water problems; storage, and natural gas production. The author has attempted to assemble in one volume the most pertinent data on each phase presented in various publications, including a bibliography.

Mr. Cloud has carefully selected his subject matter, and the book stands as a comprehensive study of oil field operations, well worth a place in the library of both technical and nontechnical oil men.

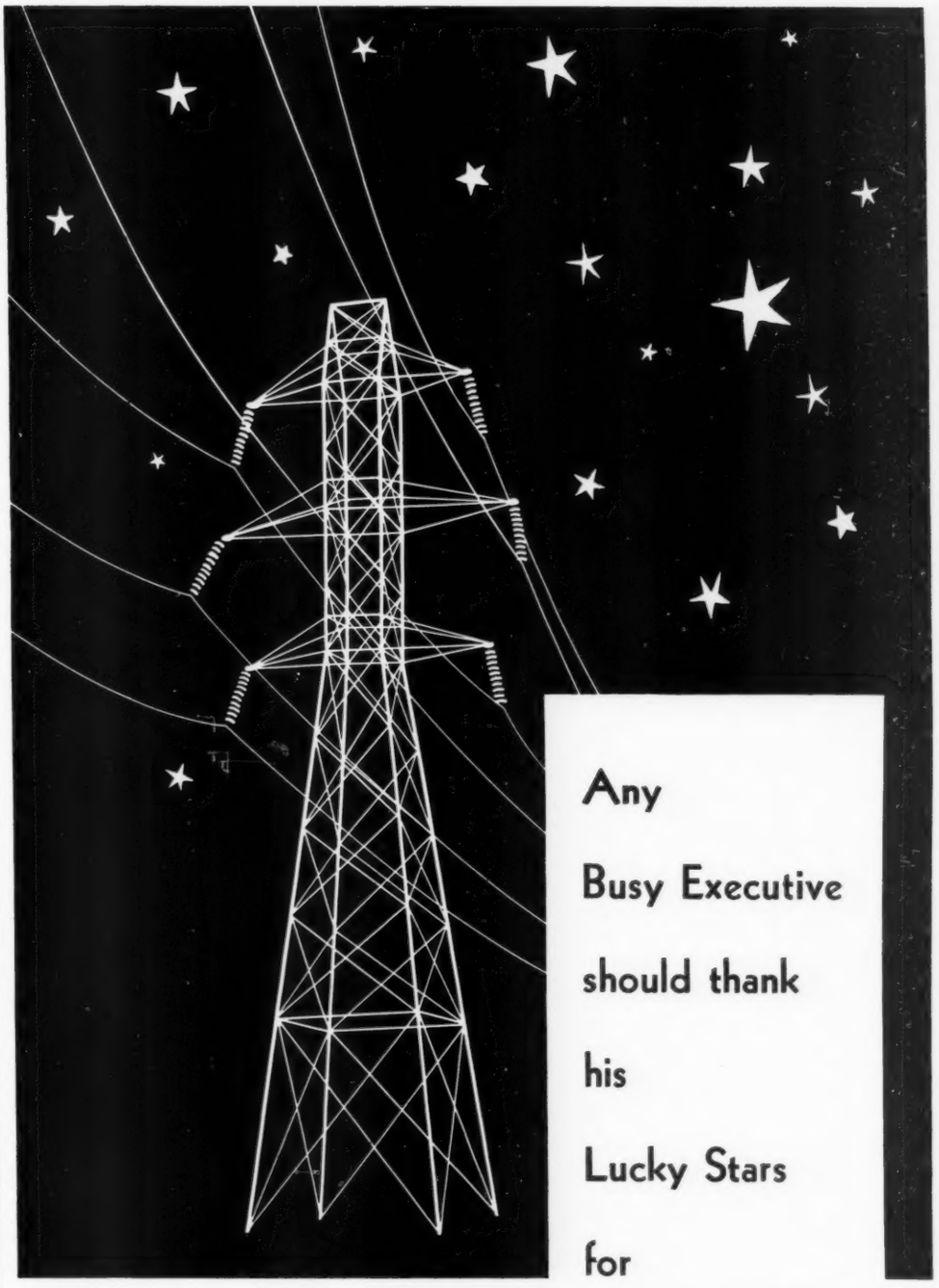
"Petroleum Production" may be purchased through the Book Department of The Oil and Gas Journal at the regular established price of $5.00, express prepaid, and a copy will be forwarded promptly upon receipt of check or money order for that sum. Where no payment accompanies the order the book will be sent express c.o.d.

Columbia Gas Report

Columbia Gas & Electric Co. reported net income for 1936 of $13,223,242, or 53 cents per common share, after provision for preferred dividends. This compared with $11,944,326, or 43 cents a share, for 1935. Gross revenues were $90,884,785, against $81,169,427 in 1935.

Gas sales in 1936 totaled 134,371,800,000, compared with 113,138,143,000 in 1935, and gas revenues were $61,626,915, compared with $54,518,119.

The report said that since the end of 1936 negotiations have been concluded for purchase from Standard Oil Co. of New Jersey of that company's interest in Atlantic Seaboard Corp. and Connecting Gas Co. Columbia Gas will also acquire Standard's Home Gas Co. subject to approval of public authorities. Columbia sold to Standard its interest in Lycoming Gas & Reserve Gas companies.



Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Mar. 13.—Deliveries to the Calgary refineries from the Turner Valley field in February were the highest in years, totaling 115,818 bbls. of crude and naphtha, daily average 4,136 bbls., compared with 101,856 bbls. in January, 3,286 bbls. Imperial Oil Refineries, Ltd., received 59,554 bbls., including 4,737 bbls. of clear naphtha, 42,712 bbls. of discolored naphtha and 12,105 bbls. of crude. This compared with 70,771 bbls. in January. February deliveries to the British American Oil Co. totaled 56,554 bbls., compared with 31,085 bbls. in January. The February total included production from B. & B. Co. No. 1.

Official figures of the lands and mines department at Edmonton for January show a total of 127,977 bbls. from all Alberta fields, compared with 124,979 bbls. in December. Turner Valley limestone production was up from 121,429 to 124,748 bbls., and other Turner Valley production was up from 859 to 966 bbls. Red Coulee light crude declined from 1,247 to 1,022 bbls. and Wainwright heavy crude from 1,444 to 1,241 bbls.

West Side Producer

On the west flank of the South Turner Valley structure, West Side Royalties No. 1, LSD 3, section 21-18-2w5, has finished a crude producer in the Madison lime at 6,379 feet. It got the lime at 5,940 feet and drilling was carried to the black lime horizon. Initial tests covering 14 hours indicated a potential production of 254 bbls. a day of crude between 44 and 45 gravity. When the rotary fluid is entirely cleared, oil production will likely be somewhat larger, possibly better than 350 bbls. The gas flow is about 2,500,000 feet a day.

Completion of West Side No. 1 extends the producing area about one-quarter mile southeast of Foundation Royalties No. 1, and indicates that the line between crude and naphtha production lies somewhat east of the earlier crude producers. It is the fifth crude producer completed on the southwest flank since last June. Turner Valley Royalties No. 1, which opened the crude area, started at 950 bbls. and is still making over 700 bbls. a day. The five wells produce 2,500 bbls. per day.

Newfold Tests Production

Newfold Royalties No. 1, LSD 11, section 21-18-2w5, got the black lime horizon at 6,254 feet. At this depth, 446 feet in the Madison, the tools were pulled and bailing commenced. A wet gas well with a small naphtha recovery was indicated.

In section 28-18-2w5, B. & B. Co. No. 1, LSD 12, finished in the Madison lime at 6,608 feet is maintaining the largest production in the field, a recent test showing 1,188 bbls. in 24 hours.

Tests in the Lime

In the west-central area, Dalhousie Oil Co. No. 8, LSD 6, section 30-19-2w5, is below 6,253 feet, after getting the Madison lime at 6,178 feet. Casing was cemented at 6,203 feet. This is the northernmost of the west flank tests to get the lime, and is expected to be the next completion.

Royalite Oil Co. No. 4 Sterling-Pacific, LSD 4, section 33-18-2w5, is below 6,792 feet after getting the lime at 6,734 feet. In the same section, No. 5 Sterling-Pacific, LSD 12, is spudding.

In section 32-18-2w5, British Trans-Canada Oils, Ltd., of Calgary has located test in LSD 10, approximately 600 yards south and west of Sterling-Pacific No. 3 producer. Work will start as soon as the weather moderates. Roxana Petroleum No. 2, S half LSD 12, same section, has started work on cellar. The Roxana company is considering another test in LSD 7, section 21-18-2w5, north and west of West Side Royalties No. 1 producer.

In section 28-18-2w5, Richland Royalties No. 1, LSD 12, is below 350 feet and preparing to set surface pipe. Location is just north of B. & B. Co. No. 1 producer. Richland No. 2, LSD 5, bottoming at 4,060 feet, is cleaning out to lower casing. Richland No. 3, LSD 14, same section, is drilling and carrying casing below 4,550 feet. Model-Spooner No. 1, LSD 4, same section, is working on derrick.

In section 29-18-2w5, Commoil No. 1, LSD 15, is working on derrick and hauling equipment. Location is about one-half mile west of the B. & B. Co. producer. Share Royalties No. 1, N half LSD 8, same section, 1,550 feet southwest of the B. & B. well, has preliminary work finished and is waiting for derrick. Heavy duty rotary equipment will be used. Test is expected to get the lime around 6,800 feet. National Petroleum Corp. No. 1, S half same LSD, will start work within the next few weeks with heavy-duty rotary outfit. In LSD 2, same section, Davies Petroleums No. 1 is rigged ready to spud. Cable tools are being used. Contractor Pat Adams is moving drilling outfit from the border fields for Sunburst Oil Co. No. 1, N half LSD 1, same section, where derrick is up.

In section 21-18-2w5, Davies Petroleums No. 2, LSD 13, about midway between B. & B. No. 1 and Foundation Royalties No. 1, has cellar dug.

In section 20-18-2w5, Monarch Royalties No. 1, LSD 9, is below 1,500 feet. In section 17-18-2w5, Prairie Royalties No. 1, LSD 16, immediately southwest of West Side Royalties No. 1 producer, has spudded. Flank Petroleums, Ltd., in which Weymarn Petroleums, Ltd., will have approximately one-third interest, is planning to drill four wells in Turner Valley, of which No. 1 in NW quarter section 17-18-2w5 will start by about May 1. Location will be about 1½ miles southwest of Foundation No. 1 producer.

In section 16-18-2w5, Revenue Petroleums, Ltd., is preparing to start No. 1 test in N half LSD 15, about a quarter mile south and a little east of West Side Royalties No. 1 producer, It is expected to get the limestone at 6,100 feet.

In the same section, Richwell Oil Co. No. 1, LSD 5, has derrick timbers on location.

In section 9-18-2w5, National Petroleum Corp. No. 2, LSD 14, has standard rig installed ready to spud. Location is over a mile south of West Side Royalties No. 1, which is now the southernmost producer in the field. D. & D. Oils No. 1 has been located in LSD 12, same section. Marine Petroleums, Ltd., will drill its No. 1 test in LSD 11, south of National Petroleum Corp. No. 2.

Far South Location

A new farthest south location has been spotted by Alturner Oils, Ltd., in LSD 4, section 9-18-2w5.

New Locations Made

In the west-central area, Mar Jon Oil Co. of Vancouver, British Columbia, has acquired 160 acres in NW quarter section 18-19-2w5, and is arranging to spud Mar Jon No. 5 before May 1.

In section 20-18-2w5, Virginia Oil Royalties of Vancouver has located its No. 1 test in LSD 4. Harland Petroleums, Ltd., of Calgary is arranging for a test in section 18-18-2w5. Thomas J. Noble is president of the company. Glencoe Oils, Ltd., of Calgary will drill in N half LSD 10, section 16-18-2w5.

North Turner Valley

In the North Turner Valley, Phillips Royalties No. 1, LSD 16, section 16-20-3w5, has resumed from 2,370 feet. This is the most northerly activity on the west flank, and approximately 14 miles northwest of National Petroleum No. 2, the most southerly active test.

Government Lease Auction

The Alberta government's auction of two LSDs in section 29-18-2w5 last week brought an average price of $404 an acre, compared with $113 at the last previous auction of west flank acreage on December 18. LSD 3 was purchased by Lieut.-Col. J. Fred Scott, representing a group including J. H. Woods, Tom Campbell, Major J. Strachan, Dr. Frank Wilson, Morris Groberman and K. Kayler for $21,280.50, approximately $532 an acre. The acreage offsets Davies Petroleums No. 1 location to the west. LSD 5, cornering to the northeast, was purchased for $11,110 by F. R. Freeze representing Credit Securities, Ltd., of Calgary.

Ontario Operations

In the Brownsville field, Oxford County, Ontario, W. C. Patterson & Co. No. 2, Lot 22, Concession 12, Dereham Township, finished around 920 feet with 1,000,000 feet a day open flow. Patterson No. 3 is being started in Lot 4, Concession 10, Bayham Township, Elgin County, 1,000 feet south of No. 1 gasser. Armand Smith No. 5, Lot 5, Concession 10, Bayham, is drilling 1,000 feet south of No. 4 gasser in the same lot, with Basil Sunday as contractor. Brownsville-Nelson Gas Syndicate No. 1, Nelson farm, N half Lot 6, Concession 10, finished at 967 feet with 18 feet of pay sand and flow gauging 1,333,000 feet a day. Stover & Rawlings, contractors, are moving the outfit due east of Brownsville-Nelson No. 2, on the same farm. In Lot 8, Concession 10, Bayham Township, P. L. Jackson of Dunnville is moving a rig from Eden field for a test for A. B. Holmes & Co. of Toronto. The Gregory Syndicate is drilling a test almost due north of this location in Dereham Township, east of the main field.

In Lot 24, Concession 11, Dereham Township, W. J. Aikens No. 2 is drilling north of the M.C.R. track, and north and west of Aikens No. 1 in the same lot, which finished with a flow of 5,380,000 feet a day. A mile northwest of this location, F. Culver of Dunnville is drilling a test for a Toronto syndicate.

In the Eden field, E. P. Rowe No. 1, Nathan Gray farm, Lot 27, Concession 8, Bayham Township, Elgin County, is drilling.

In the Dunnville area, Haldimand County, Romney Gas & Oil Co. has finished six shallow gassers with production ranging up to 100,000 feet a day, which is being taken by the Dominion Natural Gas Co. Additional wells will be drilled.

In Perth County, E. F. Coste & Associates No. 1, James Chalmers farm, North Easthope Township, is below 600 feet. D. G. Lauer of Tillsonburg is handling the contract.

In the Tilbury field, Kent County, MacNamara Construction Co. No. 1, Elmer Cox farm, Lot 5, Concession 10, Tilbury East Township, finished in the Tilbury sand with pumping production of 25 bbls. a day. Contractor Clare Stover is moving the outfit 1,000 feet south for No. 2 test. Perdue Syndicate No. 1 J. H. Williams farm, Lot 3, Concession 8, is pumping 20 bbls. a day.

STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA OIL COMPANIES

	Dec. 31, 1936	Nov. 30, 1936	Dec. changes	Dec. 31, 1935
1. Nongasoline-bearing crude residuum, gas and diesel oils	74,445,997	73,628,773	+817,224	68,201,291
2. Gasoline-bearing crude	33,770,339	33,680,672	+89,667	33,950,469
3. Unblended natural gasoline	1,828,636	1,881,460	—52,824	1,568,182
4. Gasoline (not including distributing and service stations)	12,384,540	11,142,817	+1,241,723	10,760,901
5. Naphtha distillates	*1,387,940	*1,788,556	—400,616	*1,695,564
6. All other stocks	†7,526,284	†8,089,027	—562,743	†9,453,139
Total	131,343,736	130,211,305	+1,132,431	130,628,646
*Estimated amount of unfinished gasoline contained in item No. 5	1,133,326	1,462,241		1,333,034
†Coke included in item No. 6	246,292	261,448		456,766

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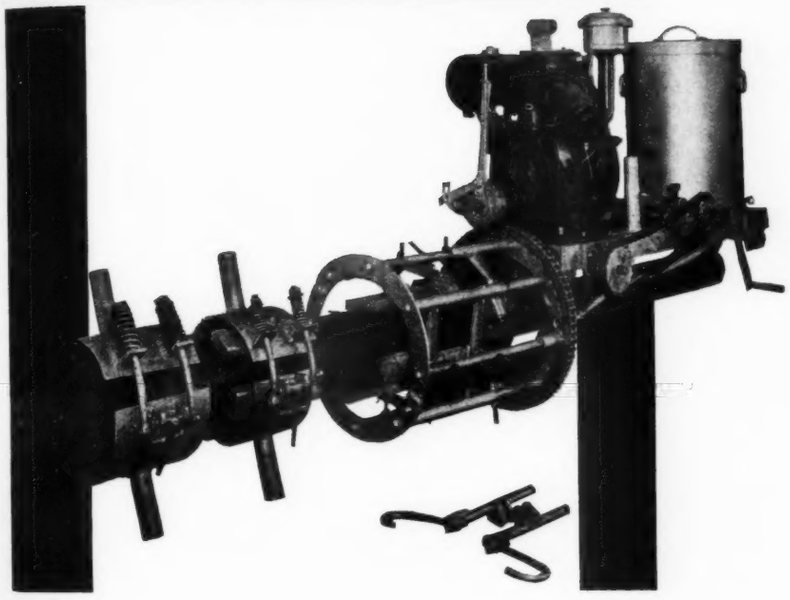
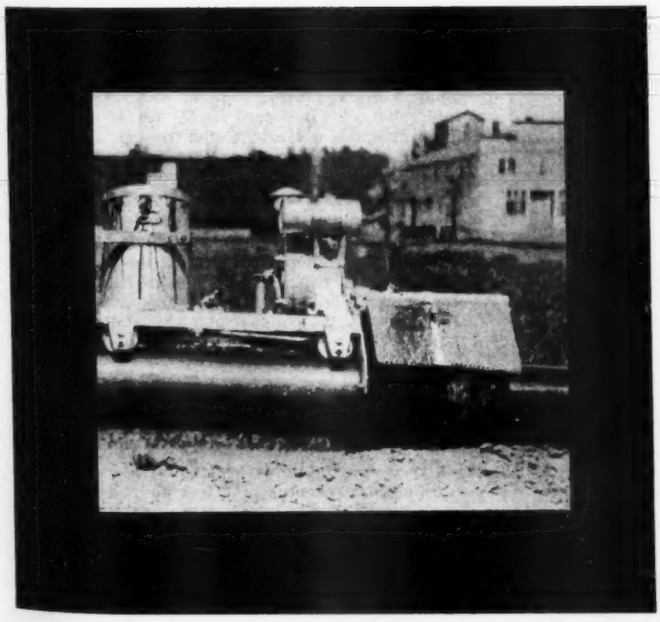
Pipe Cleaning and Priming Machine





TRAVELING TYPE

FOR PIPE SIZES 2-INCH TO 24-INCH, INCLUSIVE

THIS SMALL, LIGHTWEIGHT, POWER-DRIVEN MACHINE IS DESIGNED FOR CLEANING, OR PRIMING OR BOTH:

. . . It is especially desirable for: **Reconditioning work:** or the **cleaning and priming of new pipe.**

Illustrated from right to left, upper photograph, are: the Drive Chassis, to which is attached the Priming Head; the Brush Head, and the Cutter Head for cleaning and descaling.

THE DESIRED TYPE OF HEAD IS QUICKLY ATTACHED TO THE CHASSIS

. . . and the pipe is cleaned, brushed and primed at an **absolute minimum of expense.**

CHIPPING ACTION by a series of toothed cutter wheels rotating around the pipe

. . . absolutely removes the dirt and scale and thoroughly cleans the pipe.

. . . Knives may be used for the removal of old coatings.

ONLY TWO MINUTES ARE REQUIRED FOR APPLYING MACHINE TO, OR REMOVING IT FROM PIPE; AND ONLY ONE MAN IS REQUIRED TO OPERATE IT.

. . . Ideal for cleaning the pipe in the ditch, as it requires very little clearance.

. . . Cleans close up to collars, valves, and other fittings.

MACHINE TRAVELS ALONG THE PIPE AT A SPEED RANGING FROM TWO TO FIFTY FEET PER MINUTE depending entirely upon conditions of pipe, and degree of cleanliness required.

. . . Power is furnished by a single-cylinder, air-cooled engine which revolves cleaning head around the pipe at 110 R. P. M.

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Houston, Texas, U. S. A.

Texas and Louisiana Gulf

By
F. L. SINGLETON

WILL TEST GULF OF MEXICO; OLD SALT DOMES SHOW OIL

HOUSTON, Tex., Mar. 15.—Further development around the flanks of two old salt dome structures located in Coastal Louisiana and the Texas Gulf Coast has been encouraged by showings in two tests that have indicated commercial possibilities. Other interesting developments in that area included the announcement of a proposed test to be drilled in the Gulf of Mexico and a scheduled production test to be made of an interesting wildcat in Matagorda County.

Stanolind Oil & Gas Co. No. 1 May E. Fitzhugh, located on the south flank of the Big Hill dome, Jefferson County, flowed 89 bbls. of 35 gravity oil per day through a quarter-inch choke with tubing pressure 300 pounds and casing pressure 700 pounds. Production is from a screen setting made in 14 feet of sand bottomed at 4,927 feet. The well is southeast and southwest of several deep tests drilled by the old Yount-Lee Oil Co. and Stanolind Oil & Gas Co., which were unable to test the flank sands due to mechanical trouble, caused by heaving shale. Small production was opened in 1923 by several wells producing at between 1,700 feet to 1,800 feet and as this was short lived, operators have turned their attention to the development of flank sands.

Humble Oil & Refining Co. has made application to the War Department at Galveston for a permit to drill No. 1 State in the Gulf of Mexico and a hearing on this application will be held at Galveston March 19. The well is to be drilled approximately 4,000 feet out in the Gulf or about 4,300 feet due south of the company's No. 1 McFaddin, a dry hole drilled in 1936 on the shore line of Jefferson County. The acreage was acquired last year from the state and has been worked with geophysical instruments.

Mystery Test

The "mystery" test of Glenn H. McCarthy, No. 1 Foley, north of Palacious, Matagorda County, which has set off an extensive leasing and royalty buying campaign is nearing contract depth of 8,500 feet and some reports, although not confirmed, are to the effect that casing is to be run during the week. Location is in the Suzan Perkins Survey.

Another failure of the Aldine area, Harris County, was apparently made by Texas Gulf Producing Co. No. 1 Gillespie and Garnsey which is coring ahead to a contract depth of 7,000 feet after finding salt water with no showing of oil or gas on a drill stem test at 6,925-71 feet. The well ran low on all markers and was tested after sand with an oil odor was cored at 6,969-71 feet. On the Bammel Prospect, Superior Oil Co. has spudded No. 1 Bentler, in the Ehrhardt Survey. In the Clinton field, a protection string of 7-inch casing has been cemented at 8,000 feet in No. 1 D. A. Oates, located 4,150 feet south of the discovery well, which blew out after encountering a soft formation at 8,100 feet. No geological markers have been obtained on this test and its structural position is not known.

On the Cheek Prospect, central Jefferson County, on which Humble Oil & Refining Co. has one active deep test, Magnolia Petroleum Co. is moving in material for No. 1 J. H. Phelan, 2,645 feet north and 333 feet east of the southeast corner of the T.&N.O. Survey No. 14. To the south and west of the town of Fannett in the J. C. Grant Survey, D. B. McDaniel and others are building derrick for No. 1 Nona Mills, a mile west of a dry hole drilled by the same operators.

The second completion in the recently discovered Segno field, southern Polk county, is apparently assured by J. K. Dorrance No. 2 Wing estate, west of the discovery well in the I.&G.N. Survey No. 15. The hole is bottomed in the upper Cockfield sand at 5,197 feet and 7-inch casing is being cemented. The Cockfield was topped at 5,115 feet, and sand showing oil and gas was cored at 5,162-80 feet, 5,180-84 feet and shale and sand showing oil and gas from 5,184-97 feet. Humble Oil & Refining Co. has spudded No. 1 Kirby Lumber Co. in the P. Garcia Survey and Gulf Oil Corp. is moving in material for No. 1 Wing in the I.&G.N. Survey No. 15.

In the LaBelle field, Jefferson County, Sun Oil Co. is moving in material for No. 1 John Ward, located 467 feet west of the east line and 933 feet south of No. 2 Broussard and Hebert, the discovery well in the William Burton Survey. The discovery well originally completed for a wet gasser several weeks ago is now flowing pipe line oil and on a recent 24-hour gauge it made 53 bbls. of 37 gravity oil through a one-eighth inch choke, with tubing pressure 2,150 pounds and casing pressure 2,250 pounds.

Silsbee Near-Completions

Two more producers are near completion in the Silsbee field in Hardin County by the Republic Production Co. and Houston Oil Co. No. 6 Brooks topped the lower sand at 6,948 feet and is being tested at a total depth of 6,961 feet, with 7-inch casing cemented at 6,944 feet. Dry gas was made on a drill stem test in the upper Cockfield section at 6,850-65 feet, and 600 feet of pipe line oil was recovered from the lower sand at 6,945-61 feet. No. 8 Brooks is bottomed in the same sand at 6,970 feet with 7-inch casing cemented at 6,950 feet, following a drill stem test at 6,949-65 feet which showed 330 feet of pipe line oil and 275 pounds of pressure.

Hugh M. Craig, Gulf Oil Corp., Fort Worth, Tex.

The western limits of the South Cotton Lake area, Chambers County, were defined by the abandonment of Kirby Petroleum Co. No. 1 W. D. Haden at 6,607 feet. The Heterostegina was topped at 6,026 feet, and the Marginulina at 6,303 feet. It is about 6,300 feet due west of Salt Dome Oil Corp. No. 1-A and 1-B Lawrence, recently completed as distillate producers.

At the Lockridge field, Brazoria County, Gulf Oil Corp. and Shell Petroleum Co. have two wells on the sand and are preparing to make production test. In the southern part of the field and about 1,700 feet east of production, Shell Petroleum Corp. No. 2 Ramsey is bottomed at 6,365 feet where a production test was to be made. To the west and offsetting No. 2 Wilkes and Smith, Gulf Oil Corp. No. 1 Carrie Baker is bottomed in sand and shale showing oil at 6,326 feet. Both wells are normal on top of the producing horizon.

Dry Hole in Houston County

Southwest of the Grapeland discovery well, Houston County, Arthur Cameron and others No. 1 A. B. Spence tested salt water in the Woodbine sand and has been abandoned at 6,250 feet. American Liberty Oil Co. No. 1 J. D. Bean located in the D.W.R.R. Co. Survey, southwest of the discovery well is coring in hard tight sand at 6,041 feet and is reported to have had an odor of distillate in cores taken above that depth. It is said that the well will be cored to the water level and a production test will be made through perforated casing. The third active test to get under way in this area is H. L. Hunt No. 1 J. E. Elliott, located in the J. Maria Procella Survey which has cemented 13⅜-inch surface casing.

Shell Petroleum Corp. was preparing to make a drill stem test in No. 2 Maco Stewart at the Hitchcock Prospect, Galveston County. The hole is bottomed in shale at 6,116 feet and the test is being made after sand with a good odor of oil was cut at 6,109-10 feet. It is 4,400 feet east of No. 1 Maco Stewart recently abandoned after blowing out around 5,100 feet.

South Louisiana

Along the Louisiana coast line, attention was centered on the Jefferson Island salt dome in Iberia Parish, as preparations were being made to retest Jefferson Lake Oil Co. No. 414 State Lake Pigneur after it started making salt water with considerable oil. Bottomed in 15 feet of oil sand at 6,945 feet, the well was tested through perforated casing at 6,930-40 feet, and flowed considerable oil before sanding up. Screen and liner were pulled and on a drill stem test 3,500 feet of oil and salt water was recovered. A squeeze job was made and the casing reperforated and after running swab, the well flowed through the drill stem an estimated 10 bbls. of fluid per hour, with salt water, for a six-hour period. The tubing and testing tool has been pulled and the well is being tested again after making another squeeze job and reperforating the casing.

Out of several tests drilled for oil on this old salt dome, heretofore mined for sulfur and salt, this is the best showing encountered and regardless of whether or not it makes a commercial producer, it will no doubt lead to further development and may eventually effect four other old piercement salt domes which were considered nonproductive by many geologists. These four domes are the oldest in the district and are located in a straight line along a southeast trend and are known as Avery Island and Weeks Island in Iberia Parish and Cote Blanche and Belle Isle in

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St. Mary Parish. They have been under lease for a number of years by the Sun Oil Co., Humble Oil & Refining Co., Louisiana Land and Exploration Co. and the Avery Salt Co.

The new Valentine field, Lafourche Parish, received its second producer by the completion of Pan American Production Co. No. 2 Harang for an initial production of 15 bbls. per hour through a quarter-inch choke, with tubing pressure 850 pounds and casing pressure 650 pounds. Gravity of the oil tested 33 degrees. Production is from a screen setting made in sand at 6,927-45 feet, the total depth. It is 660 feet northwest of the discovery well in section 8-17s-20e.

Good Well in Jennings

Another prolific producer was marked up for the west flank of the Old Jennings field, Acadia Parish, Superior Oil Producing Co. No. 1 Iowa-Jennings, with an initial production of 711 bbls. per day through a 14/64-inch choke with tubing pressure 1,310 pounds and casing pressure 1,300 pounds. The well is producing through perforated casing at 6,464-85 feet; 6,450-56 feet; 6,392-6,410 feet; 6,420-39 feet and 6,357-70 feet. It is southeast of the company's three wells in section 41-9s-10w. Locations were made by the company for No. 2 Eunice-Crowley and No. 2 Jennings Heywood in section 12 and 41 respectively.

Another deep test has reached the pay in the Lafitte field in Jefferson Parish, and is scheduled to be completed. It is Texas Co. No. 6 Rigolettes, in section 29, bottomed in sand showing oil at 9,456 feet. The sand was topped at 9,436 feet and an electrical coring test showed 12 ohms resistance and 120 millivolts porosity at 9,428-51 feet. Same company's No. 6 Lafitte, in section 20, is drilling below 8,243 feet.

Continental Oil Co. and Gulf Oil Corp. No. 1 O. C. Hebert, Abbeville Prospect, Vermilion Parish, was tested through perforated casing at 7,666-75 feet and while cleaning itself of mud and wash water under high pressure, it sanded up. A cement squeeze job is being made through the perforations. If it fails to produce at this level, a shallower sand at approximately 5,500 feet will be tested. This was the deepest test ever drilled on the Gulf Coast, 12,216 feet, at which depth it showed possibilities of production, but due to mechanical trouble, the operators were unable to make a satisfactory test. Location is in section 20-12s-3e.

The wildcat test of Barnett Petroleum Co. No. 1 Tullis, located in section 34-2s-1w, East Feliciana Parish, is shut down at 6,140 feet, after passing through the Vicksburg and it is reported that two companies have agreed to donate bottom-hole money to carry the well to the Cockfield sand.

Eastern Fields

(Continued from Page 70)

farm in McComas district at 3,267 feet; Brown shale 2,895-3,255 feet, with 783,000 feet of gas at 2,840-45 feet. In this district, the Kentucky-West Virginia Gas Co. completed the test on the Andrew Ray farm at 3,560 feet; Brown shale at 2,731-3,532 feet with a gauge of 212,000 feet a day from the shale.

In Grant district, Cabell County, Larner Gas Co. completed a gas well on the Fred Carter farm, gauging 106,000 feet a day. The Brown shale was at 3,190-3,471 feet with gas at 3,292-3,318 feet.

In Calhoun County, Godfrey L. Cabot, Inc. on the H. Lucretia Harless farm in Lee district drilled to 2,440 feet and it was dry; Big Injun at 1,970-2,005 feet; show of gas 1,978 feet; Berea absent.

In Doddridge County, the Columbian Carbon Co. deepened No. 1 John Bland, on Douglass Camp Run of Meathouse Fork, in New Milton district, from Salt sand in which it had been a producer to the Big Injun sand at 1,750 feet. It is a gas well gauging about 1,000,000 feet a day.

In Gilmer County, K. F. Ermich & Co. completed a test on the Allen Goff farm in DeKalb district at 1,564 feet. The Maxon sand was at 1,540-60 feet, with gas gauging 142,500 feet a day in that formation. In Glenville district, the Pittsburgh & West Virginia Gas Co. completed a test on the Floe Peters farm in the Big Injun sand at 1,824 feet. It is a small gas well. In Center district, Carnegie Natural Gas Co. completed a second test on the Charles Despard farm in the Big Injun sand at 2,220 feet, good for 150,000 feet a day. In this district, this company drilled No. 5 L. A. Westfall through Berea and into the slate at 2,622 feet. It was dry.

In Lincoln County, the Martin Gas Co. was well repaid for deepening No. 1 Black and Yeager in Sheridan district. Brown shale lay at 2,630-3,227 feet with 4,362,000 feet of gas at 2,640-3,227 feet.

In Wirt County, Kidder and Goodwin drilled a test on the W. M. Pomroy farm in Burning Springs district through the Berea sand at 2,185 feet. It was a dry hole.

New Work

In Cabell County, locations were made by E. L. Lusher on the Nellie B. Morrison farm in McComas district and the West Virginia Gas Corp. on the Gilbert Porter farm, same district.

In Clay County, the Virginian Gasoline & Oil Corp. has a location for No. 127 on the Brown, Swann and Goshorn lease in Henry district and is rigging up No. 126. The Hope Natural Gas Co. has a rig standing for No. 7,766 on the Mary Wetherell Estate in Pleasants district.

In Lincoln County, Morris and Adkins will drill a test on the Edward Holderby heirs farm in Sheridan district. In Laurel Hill district, the Huntington Development Co. made a location for No. 279 on its own tract.

In Ritchie County, Creed Barker made a location for No. 2 Henry Barker, in Murphy district. Loris Swadley will drill a test on the J. H. McGinnis farm in Union district. In Tyler County, C. W. Edgar has a location on the John Easthame heirs farm in Ellsworth district.

In Wayne County, Huffman and York will drill on the Maggie Hatten farm in Butler district. In Kanawha County, the Poca Fork Oil & Gas Co. has locations for Nos. 2 and 3 on the D. M. Cantaberry farm in Elk district.

In Pleasants County, Perry Riggs has a location on the United Bank of Middlebourne lease on Hog Pen Run in McKim district. On Cow Run in Grant district, C. L. Barron is drilling No. 4 J. H. Roberts. On Middle Island Creek in Union district, Grant and Athey made a location on the J. R. Smith farm.

In Marion County, the Hope Natural Gas Co. will deepen the No. 3 on the Lavina Fetty and others lease in Mannington district from the Injun sand in which it was a producer at 2,265 feet.

Michigan Fields

(Continued from Page 66)

feet when acid treatment of a show at 3,821 feet failed to make commercial production.

A show of oil was being acidized by the Burnstein Oil & Gas Co. in the Dundee in the No. 4 Keel, NW NE SE section 35, same township.

Two tests in the Ferris Township section of the Crystal-Montcalm field also were unsuccessful in the Dundee, namely: Rex Oil & Gas Co. No. 1 Conners, SE NW NE section 35-11n-5w, and the Daily Crude Oil Co. No. 3 Fulford, NW NE NE section 35.

Fred Upton, chief engineer of the electric compressor plant of the E. H. Moore, Inc., in the Fitts field, Pontotoc County, Oklahoma

New York-Pennsylvania Gas Fields

COUDERSPORT, Pa., Mar. 13.—Completion of the deep western Warren County, Pennsylvania, wildcat as a dry hole and the announcement of new locations in Crawford County, Pennsylvania, and Cattaraugus County, New York, were features of the report of the New-York Pennsylvania deep sand gas fields for the week ended March 12.

Potter Development Co.'s test on the D. Spetz farm, Pittsfield Township, Warren County, was abandoned as a dry hole at a total depth of 5,165 feet after passing through both the Red and White Medina formations. The Red Medina was found at 4,961-5,086 feet and the White Medina at 5,126-5,137 feet.

The same company is now building the rig on its second location in Crawford County. This test is 500 feet from the west line and 500 feet from the south line of the N. D. Dahl farm in Hayfield Township. It is in section A, 16,800 feet from the west line and 13,150 feet from the north line, Meadville quadrangle. The elevation is 1,337 feet.

Belmont Quadrangle Drilling Co. has a new location, 500 feet from the east line and 700 feet from the south line on the A. G. Hoffler farm in Leon Township, Cattaraugus County, New York.

Pennsylvania Operations

Potter Development Co. is cleaning out its deep wildcat on the Crawford Estate property in Keating Township, Potter County, preparatory to shooting. This well is down 5,052 feet. Ward Wasson Co. has cemented the casing in its well on the W. B. Hall farm, Genesee Township, which has been drilled to 5,310 feet.

Two other Potter County tests are drilling: Potter Development Co. at 4,283 feet on the L. C. English farm and G. L. Cabot, Inc., at 3,850 feet on the R. E. Courtwright farm, both in Harrison Township.

Sylvania Corp. is drilling at 4,823 feet on the M. W. Jamieson, Kinzua Township, Warren County, after passing through the Oriskany at 4,799-4,819 feet. Potter Development Co. is shut down at 4,928 feet on the Lessor & Launer farm, same township, and Updegraff is building the rig for a test on the C. E. Erickson farm, Elk Township.

G. L. Cabot, Inc., is spudding in on the Union Joint Stock Land Bank farm, in Brookfield Township, Tioga County. Two Tioga wells are being drilled by the Potter company, one at 2,310 feet on the C. G. Dearman farm, Middlebury Township, and the other at 1,845 feet on the H. C. Kemp farm, Farmington Township.

McKenry and others have resumed drilling on their Venango County wildcat and are down 2,665 feet on the Stellman farm in Rockland Township.

Potter Development Co. is drilling at 2,855 feet on the J. Chapin farm in Rockdale Township, Crawford County after topping the flint formation at 2,840 feet.

New York Operations

G. L. Cabot, Inc., passed the Tully lime at 4,081-4,136 feet and is now drilling at 4,425 feet on the Lee Harder No. 2 farm in Alma Township, Allegany County. Empire Gas & Fuel Co. is fishing at 2,060 feet on the K. Mulvey farm, same township, and Kaufman and others are drilling at 2,004 feet on the Bank Angelica property, Allen Township.

Three Steuben County wells are drilling. Atwater and others are down 730 feet on the Herrington farm in Woodhull Township and Sylvania Corp. is drilling at 310 feet on the William Hendrickson farm in Troupsburg Township.

G. L. Cabot, Inc., is drilling at 468 feet on the T. H. Wing farm in Greenwood Township. Two hundred and twenty-one feet of 10-inch drive pipe was run in this hole and 468 feet of 8¼-inch casing.

Cunningham Natural Gas Co. encountered a show of oil in its test on the H. Hotchkiss farm, Randolph Township, Cattaraugus County. This show was found in a sand at 665-795 feet. Eight hundred and eight feet of 8-inch casing was run in this hole.

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Among Gulf Coast Drilling Contractors

Following an agreement with the owners of small acreage in the Amelia field, Jefferson County, Humble Oil & Refining Co. has let contract for several tests, and that area is becoming one of the most active on the Gulf Coast. Until recently, the Humble company had been operating one or two company-owned rotaries, but has recently turned the development over to Gulf Coast contractors, who are at this time drilling six wells. The contractors include Rowan Drilling Co., Harry L .Edwards, Harvey & Rush and Heyser & Heard. Two proposed tests will be made by Stanolind Oil & Gas Co. and contracts are expected to be let during the week.

The majority of new work starting along the Gulf Coast continues to be centered in proven areas. Out of a total of 23 new locations the past week only four were wildcats. These were made in the Long Point area in Fort Bend County by Earl Trone and others, the Cheek area and Gilbert ranch prospects in Jefferson County by Magnolia Petroleum Co. and D. B. McDaniel and others, and in Harris County by Superior Oil Co. on the Bammel Prospect. Humble Oil & Refining Co. is active in the Anahuac, Amelia, Raccoon Bend, Heyser and Tomball fields. Sun Oil Co. is starting a deep test in the LaBelle field in Jefferson County. Albert Plummer has rigged up in Hastings for No. 1 A. W. Brown, while in Segno, Boling, Tomball, South Houston, Placedo and Withers fields Gulf Oil Corp., Crosby and others, Koury Drilling Co., Stanolind Oil & Gas Co., Superior Oil & Gas Co. and Texas Co. are starting new operations.

Harry L. Edwards, who has been drilling a well in the South Extension area of the Dickinson field for the Coast Petroleum Co., recently purchased a new heavy-duty rotary and it is being rigged up in the new Diadem area, northwest of the field proper for the Diadem Oil Corp. of Texas, which has made application to drill approximately 14 wells. In the Cotton Lake field in Chambers County, Salt Dome Oil Corp. No. 1 Haden has been abandoned and the rig will probably be moved out during the week.

Rowan Drilling Co. has abandoned the Louisiana Crusader Oil Co. wildcat test in Evangeline Parish at 7,506 feet and the rig is expected to be moved to the Pine Island Prospect in Jefferson Davis Parish for the same company for No. 1 Langley.

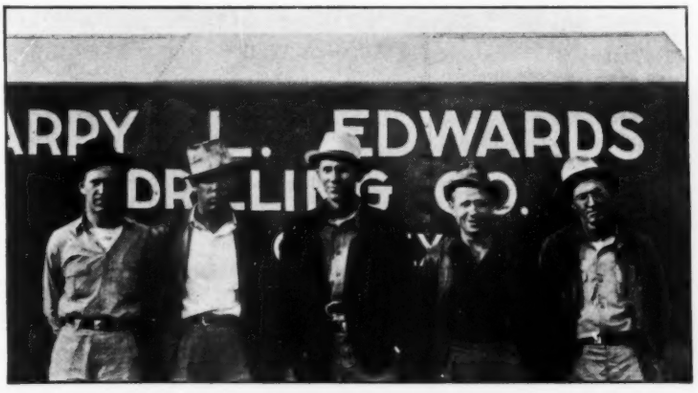
Nicklos Drilling Co. completed the second flowing well in the new Valentine field in Lafourche Parish for the Pan American Production Co. It is No. 2 Harang, which flowed 15 bbls. of 33-gravity oil per hour through a quarter-inch choke from a total depth of 6,945 feet. No. 3 Harang is nearing the pay horizon and No. 4 Harang is expected to be spudded during the week. Two rotaries are running in the Tepetate field for the Continental Oil Co.

Longhorn Drilling Co. of Three Rivers, Tex., which opened the first important deep production for the Southwest Texas district with the discovery of the Sweden field in Duval County, has two active operations in that field for the Hiawatha Oil Co. and one test is on the sand preparing to make a drill-stem test.

Loffland Brothers are testing Continental Oil Co. and Gulf Oil Corp. No. 1 O. C. Hebert, Abbeville Prospect, Vermilion Parish, at a plugged-back depth of 7,682 feet; have two active operations in the Tepetate field for the Continental Oil Co. and are running a string of 8⅝-inch casing for the same company on the Citrus Grove Prospect in Matagorda County.

O. W. Dyer has finished Atlantic Refining Co. No. 3-B McCampbell in the McCampbell field in Aransas County for an oiler and the rig is being moved to another location. No. 1 Anderson, located in the Dickinson field, for the same company, has been spudded.

Smith & McDannald have cemented 13⅜-inch casing at 2,152 feet on Stanolind Oil & Gas Co. No. 1 United Life & Accident Co., a projected deep test in Jefferson Davis Parish, Louisiana, and is drilling ahead on 11 other operations in the South Houston, Hastings, Sorrenton, Jennings, Dickinson, Long Lake and Mauritz fields for the Shell Petroleum Corp., Tide Water Associated, Pan American Production Co., Pure Oil Co. and Stanolind Oil & Gas Co.



Day crew of Harry L. Edwards on location at the Dickinson field, Galveston County: Ed Laughlin, Bud Laughlin, Bill Brinney, "Red" Brown and George Wheeler

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Kansas Developments

By DAL DALRYMPLE

OPERATIONS NEAR NEBRASKA LINE; EXTEND BAHRUTH POOL

Wildcat operations continue to increase in Kansas, 12 new tests in nine counties being started the past week. A wildcat that extended production in the Geneseo district was completed, and an old wildcat in Seward County was plugged back and recompleted as a gas well. Outstanding developments in proven areas included extensions for the Graber field of McPherson County and the Bahruth pool of Cowley County, the completion of five producers in the busy Trapp field of Russell County and two large wells in the Lerado field of Reno County.

Chautauqua, Rice and Sedgwick counties each had two of the new wildcats reported the past week. The six other new outpost operations were in Cowley, Decatur, Greenwood, Reno, Russell and Sumner counties. The Sumner County wildcat was The Texas Co. No. 1 Harper, NE SW SE section 9-30-3w, west of the Latta pool in the northwestern part of the county.

An outpost test that will be watched closely for the bearing it will have on an extensive area is the No. 1 Newbold, C NE SE section 34-2s-28w, Decatur County, being drilled by C. L. Bruce of Tulsa and associates. It is nearly 12 miles south of the Nebraska line. Location is on a block of 12,320 acres, on the Barton Arch and along a trend that extends into Nebraska. Geology on the block is by Charles T. Kirk of Tulsa. Leo Wentworth, of Clearwater, Kans., is the drilling contractor. Contract depth is 4,350 feet.

The Barbara Oil Co. No. 1 Holmes, C E half SE section 15-33-13w, prospective Viola lime pool opener in Barber County, in the south part of the state about as near the Oklahoma line as the Decatur County wildcat is to the Nebraska line, was estimated good for 100 bbls. of oil naturally, daily. It was bottomed in Viola lime at 4,845-47 feet, total depth.

The Bahruth pool of Cowley County apparently is being extended about one-fourth mile north at Sinclair Prairie Oil Co. and E. B. Shawver No. 1 Collinson, SE NW SE section 5-34-3e. It topped sand at 3,288 feet, was bottomed at 3,316 feet, produced an estimated 2,000,000 feet of gas and was spraying oil. It was to be cleaned out and tested.

The Graber pool will be extended two locations north if Derby Oil Co. and others No. 1 Arnold, SE SE NW section 16-21-1w, is completed as a producer. It had Hunton lime at 3,317-46 feet, and oil rose in the hole at 3,340 feet. It had a showing of water at total depth of 3,348 feet, and was plugging back to test the lime showing.

Russell County

The largest of five completions in the Trapp pool, Russell County, was W. I. Southern, Inc., No. 4 Michaelis, NE NE NW section 31-15-13w. It had Siliceous lime at 3,261-64 feet, total depth, and made potential of 2,580 bbls. of oil. Same operator's No. 9 Shaffer, SW NW NE section 31-15-13w, pumped 45 bbls. of oil, with salt water, after acidizing with 1,000 gallons. It topped Kansas City lime at 3,029 feet; total depth, 3,035 feet.

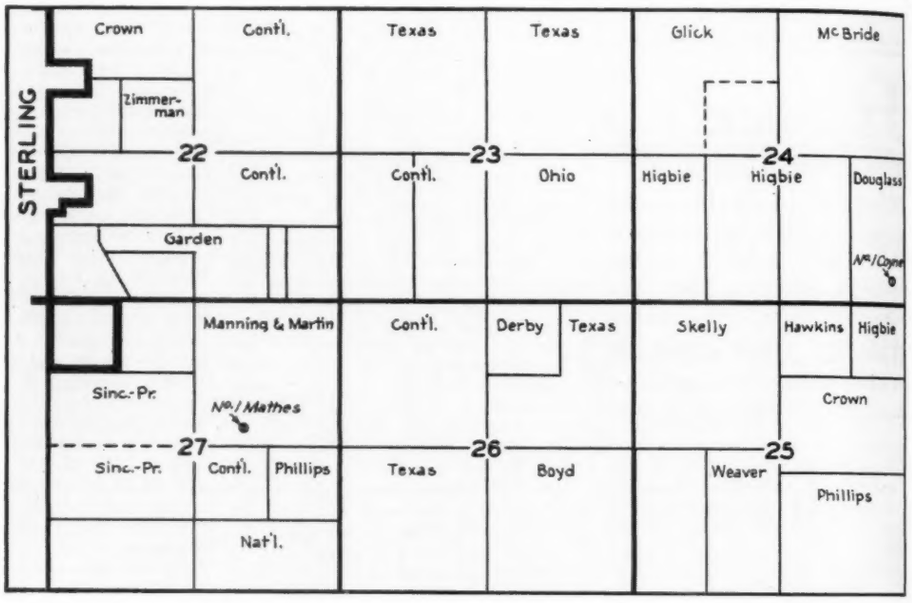
Skelly Oil Co. No. 2 Neidens, SW SW NE section 32-15-13w, had Siliceous lime at 3,331 feet; total depth, 3,336 feet; acidized and made potential of 2,547 bbls. of oil.

In the Eichman area, Dickey Oil Co. and others No. 1 Krug, SW SE NE section 34-15-13w, had Siliceous lime at 3,304-13 feet, total depth; pumped 434 bbls. of oil in 24 hours; acidized and made potential of 864 bbls. of oil, with water.

Coralena Oil Co. No. 6 Boomhower, SE NW NW section 32-15-13w, had Siliceous lime at 3,270-78 feet, total depth; acidized and made potential of 2,546 bbls. of oil.

Gulf Oil Corp. No. 1 Michaelis, NW NW SW section 32-15-13w, made potential of 1,478 bbls. of oil after acid treatment. Top of Siliceous lime was 3,318 feet; total depth, 3,328½ feet.

In the Gorham-Sullivan district, Hartman & Blair No. 7 Rouback, C S half SE NW section 2-14-15w, had pay at 3,304-12 feet, total depth, and made potential of 2,458 bbls. of oil. Transwestern Oil Co. No. 4 Polcyn B, SW NE SE section 10-14-15w, topped sand at 3,262 feet; total depth, 3,267 feet; and pumped 668 bbls. of oil in 20 hours. Stanolind Oil & Gas Co. No. 6 Benso, NW NW SW section 4-14-15w, topped Kansas City lime at 3,046 feet; had Granite at 3,390-3,400 feet, total depth; plugged back to 3,175 feet; acidized, pumped 35 bbls. of oil and 305 bbls. of water in 19 hours; later made potential of 97 bbls. of oil, with 480 bbls. of water.



L. E. Douglass No. 1 Coyne, section 24-21-8w, and Manning & Martin No. 1 Mathes, section 27-21-8w, wildcats near Sterling and west of the Hauschild-Saxman area, Rice County, are nearing pay horizons.—(Mid-Continent Map Co., Wichita)

An Atherton Well

Phillips Petroleum Co. and Indian Territory Illuminating Oil Co. No. 2 Jellison, NW NE NW section 30-13-14w, Atherton area, topped Siliceous lime at 3,216 feet; was bottomed at 3,232 feet, and made potential of 161 bbls. of oil, with 9 bbls. of water. It was acidized, and made potential of 860 bbls. of oil, with 83 bbls. of water.

New work in Russell County: W. I. Southern, Inc., No. 7 Sellens heirs, SW NE SW section 30-15-13w, drilling at 2,640 feet; same operator's No. 8 Sellens heirs, NW NE SW section 30-15-13w, rotary rig; Derby Petroleum Corp. and Reserve Development Co. No. 2 Michaelis, NW SE NW section 31-15-13w, cellar; Phillips Petroleum Co. No. 6 Hoffman, SW NW SE section 31-15-13w, moving in material; same company's No. 7 Hoffman, SE NE SE section 31-15-13w, location; W. I. Southern, Inc., No. 5 Michaelis, NE NW NW section 31-15-13w, rigging up rotary; Barnsdall Oil Co. No. 2 Krug, SE SW NE section 34-15-13w, location; S. M. Murphy and others No. 1 Deines, SE SE SW section 36-15-15w, wildcat, location; National Refining Co. No. 1 Reinhardt, NE cor. section 19-14-14w, location; Transwestern Oil Co. No. 6 Helen Polcyn, NE SE SE section 10-14-15w, rotary rig; same company's No. 3 William Polcyn, NE NW SW section 10-14-15w, cellar; Coralena Oil Co. No. 3 Chester Sellens, NW SW NW section 29-15-13w, rotary rig; W. I. Southern, Inc., No. 7 Sellens, SE SE SW section 29-15-13w, rotary rig.

Rice County

Largest oil well of the week completed in Rice County was Atlantic Refining Co. No. 2 Patton B, NW NE NE section 7-21-7w, Hauschild-Saxman district. It had Conglomerate at 3,320-32 feet, total depth; flowed 540 bbls. of oil in five hours and made potential of 2,576 bbls.

Five wells were completed in the Silica field by Gulf Oil Corp. They were: No. 4 Knop, SE NW NW section 33-19-10w; Siliceous lime, 3,275 feet; total depth, 3,291 feet; acidized; pumped 940 bbls. of oil in 14 hours and made potential of 1,499 bbls. The No. 10 Stolz, Jr., SW SE NW section 5-20-10w; Siliceous lime, 3,297½ feet; total depth, 3,313 feet; acidized; potential, 1,469 bbls. of oil. The No. 11 Stolz, Jr., NW SE NW section 5-20-10w; Siliceous lime, 3,290 feet; total depth 3,304 feet; acidized; potential, 1,358 bbls. of oil. The No. 1 Stolz, C S half N half NW section 32-19-10w; Siliceous lime, 3,288 feet; total depth 3,303 feet; swabbed 396 bbls. of oil in eight hours, with 4 per cent water; acidized; made potential of 773 bbls. of oil, with 416 bbls. of water. The No. 4 E. Steckel, NE SE NE section 31-19-10w; Siliceous lime, 3,285 feet; total depth, 3,296 feet; swabbed 198 bbls. of oil in six hours; acidized; made potential of 1,299 bbls. of oil.

In the Schartz area, Texas Co. and others No.

4 Schartz, SE SW SE section 33-19-10w, found Siliceous lime at 3,323 feet and had best pay at 3,323-37 feet, total depth. It was acidized with 1,000 gallons and pumped 290 bbls. of oil in 10½ hours. It was reacidized with 1,000 gallons, and made potential of 1,155 bbls. of oil.

Shell Petroleum Corp. and others No. 4 Hafermann, NW NW SE section 6-19-9w, Hafermann pool, pumped 819 bbls. of oil, with 2 per cent water, in 19 hours after acid treatment and made potential of 1,412 bbls. of oil. Before acidizing, it swabbed 88 bbls. of oil, with 1 per cent water, in five hours.

Estimated Daily Production

Estimated daily average production of Kansas for the week ending March 13, and for the preceding week, was as follows:

	Barrels	
	Mar. 13	Mar. 6
Oxford City	2,675	2,700
Burrton	16,375	15,875
Ritz-Canton	5,475	5,675
Graber	2,325	2,100
Hollow-Nikkel	4,100	3,575
Voshell	3,000	3,050
Wellington	3,150	2,750
Ellsworth County:		
Lorraine-South Lorraine	5,150	6,850
Other pools	1,340	1,590
Rice-Barton counties:		
Bloomer	2,850	3,700
Chase	10,300	11,275
Geneseo	2,000	2,750
Raymond	2,375	2,900
Silica	15,225	16,025
Keesling	1,925	2,550
Hauschild	4,225	3,500
Miscellaneous Rice	6,775	6,860
Miscellaneous Barton	5,150	4,200
Russell County:		
Fairport	2,315	2,665
Gorham-E. Gorham	3,280	3,790
Russell	2,530	2,475
Sullivan	5,415	5,995
Trapp	6,285	6,495
Miscellaneous Russell	5,640	7,020
Sedgwick County:		
Valley Center	1,335	1,320
Greenwich	1,295	1,330
Miscellaneous Sedgwick	2,180	1,955
Ellis County:		
Bemis	3,775	2,725
Miscellaneous Ellis	1,225	1,079
Kingman County	825	815
Stafford County	2,875	2,160
Greenwood County	9,250	9,100
Butler County	17,600	17,500
Other fields	23,035	22,110
Total Kansas	183,275	187,350

Wildcat Is Producer

Empire Oil & Refining Co. No. 1 Bantterton, SE SW SE section 11-18-8w, wildcat in the Geneseo district, topped Siliceous lime at 3,246 feet and was completed at 3,270 feet, total depth. It was acidized with 2,000 gallons and pumped 207 bbls. of oil, with a trace of water, in 19 hours, making potential of 268 bbls. of oil in 24 hours. It topped Kansas City lime at 3,822 feet. It is southwest of Geneseo townsite.

First reports of new work in Rice County follow: Gulf Oil Corp. No. 6 Knop, NW NE NW section 33-19-10w, set 10-inch casing at 179 feet and waiting on cement at 185 feet; Stanolind Oil & Gas Co. No. 2 Panning, NE SW NW section 33-19-10w, location; Skelly Oil Co. and Ewers Simpson Oil Corp. No. 1 Linville, SW NW NE section 2-20-10w, wildcat, moving in material; Mid-Continent Petroleum Corp. No. 5 Wood, NE NW NE section 4-20-10w, cellar; Stanolind Oil & Gas Co. No. 14 Specht, SW NE SE section 6-20-10w, cellar; Winkler & Koch and others No. 1 Leming, SW SW NE section 24-20-10w, rotary rig; C. E. W. Skiles and others No. 1 Helmer, NW NW NE section 7-19-8w, wildcat, cellar; Atlantic Refining Co. and others No. 2 Patton A, NW NW NE section 7-21-7w, rotary rig; Aylward and others No. 6 Johnson, NE cor. section 17-21-7w, rigging up rotary; L. E. Douglass and Derby Petroleum Co. No. 4 Hauschild, NW cor. section 15-21-7w, building rotary rig; Reserve Development Corp. No. 2 Patton, NW cor. section 16-21-7w, building rotary rig.

Reno County

Six oil wells were completed in Reno County, the largest producer being Shell Petroleum Corp. No. 2 Lee, SE cor. section 10-26-9w, Lerado field. It flowed 1,076 bbls. of oil in six hours and made potential of 4,078 bbls., after treating with 2,000 gallons of acid. It topped Chat at 3,875 feet; Viola lime, the producing formation, at 4,137 feet, and was bottomed at 4,141 feet.

Empire Oil & Refining Co. No. 1 Fluke, NW NE SW section 15-26-9w, Lerado field, had Viola lime at 4,152 feet and pay at 4,158-63 feet, total depth. It was acidized with 2,000 gallons and flowed 597 bbls. of oil in six hours, making potential of 2,265 bbls., with 16 per cent water.

In the Burrton field, Sinclair Prairie Oil Co. No. 1 Kaufman, SW SW SE section 18-24-4w, topped Chat at 3,325 feet; total depth, 3,389 feet, and made potential of 1,439 bbls. of oil, with 45 bbls. of water. Same company's No. 6 Matlock, NW SE SW section 3-24-4w, topped Chat at 3,258 feet; Hunton lime, 3,596 feet; Viola lime, 3,709 feet; Wilcox sand, 3,722 feet; Siliceous lime, 3,812 feet; total depth 3,834 feet, and plugged back to 3,390 feet to complete. After shooting and acidizing, it made potential of 667 bbls. of oil, with 40 bbls. of water. Same company's No. 6 Seedle, C S half S half NE section 17-24-4w, pumped 30 bbls. of oil and 500 bbls. of water in 24 hours after acidizing with 2,000 gallons; later pumped 15 bbls. of oil and 400 bbls. of water. Top of Chat was 3,305 feet; total depth 3,382 feet.

In the Haven sector, Carter Oil Co. No. 1 Ventsam, SE SE SW section 19-24-4w, topped Chat at 3,334 feet and was bottomed at 3,378 feet. It was acidized with 2,000 gallons and made potential of 788 bbls. of oil, with 5 per cent water.

The following new tests in Reno County were reported. Imo Oil & Gas Co. and others No. 1 Watkins, SE cor. section 14-22-7w, wildcat in northern Reno County and south of the Hauschild area in Rice County, moving in material; Olson Drilling Co. and Shell Petroleum Corp No. 5 Fast, NE NE SE section 25-23-4w, building rotary rig; Shaffer and others No. 5 Tucker, SW NW SW section 20-24-4w, cellar; Shell Petroleum Corp. No. 1 Adkins, NE NW SE section 15-26-9w, rigging up rotary.

Barton County

One oil well, one gas well and two failures were recorded in Barton County. Continental Oil Co. No. 1 L. W. Ainsworth A, SE SE NE section 33-16-13w, Ainsworth pool, made potential of 1,202 bbls. of oil in 24 hours, down four hours. Production was from Siliceous lime topped at 3,386 feet; total depth, 3,395 feet.

In the Barton County sector of the Otis area, Morgan & Flynn No. 1 Brack, NE cor. section 21-18-15w, had sand at 3,461 feet; total depth, 3,555 feet, and produced 47,000,000 feet of gas. It topped Kansas City lime at 3,200 feet; Conglomerate, 3,443 feet.

Derby Oil Co. No. 1 Benjamin, NE NE SW section 31-20-13w, in the Hiss pool, failed to make a producer by shooting and acidizing and was dry and abandoned at 3,360 feet, total depth. Top of Anhydrite was 768 feet; Kansas City lime, 3,360 feet, total depth. Top of Anhydrite was 768 feet; Kansas City lime, 3,278 feet; slight showing of oil at 3,330 feet.

Duwe & Brouk No. 1 Baker, NE SE SW section 16-17-13w, wildcat north of Hoisington, had Anhydrite at 908 feet; Fort Riley, 1,870 feet; Siliceous lime, 3,486 feet; had hole full of water at 3,491 feet, and was dry and abandoned at 3,500 feet, total depth.

New work in Barton County: Magnolia Petroleum Co. No. 4 Roetzel, SW SW NE section 24-20-11w, cellar; Spencer & Yarnell No. 1 Patzner, NW NW SE section 36-17-11w, location; same operator's No. 2 Patzner, NE NW SE section 36-17-11w, cellar; same operator's No. 3 Patzner, NW NE SE section 36-17-11w, moving in material; Sam Murphy No. 1 Beck, NE cor. section 17-17-12w, location.

Harvey County

One producer and one failure was recorded in the Warkentine area, Harvey County. Shaffer and others No. 1-A Haury, C NE SE section 11-23-2w, topped Chat at 2,950 feet and was bottomed at 2,970 feet. It flowed 338 bbls. of oil in six hours and made potential of 1,183 bbls. of oil.

Bradley Oil Co. No. 1 Haury, NW NW SW section 13-23-2w, was dry and abandoned in Chat at 2,979-96 feet, total depth.

Kingman County

Shell Petroleum Corp. No. 1 A. M. McMichael, C W half W half SW section 12-27-10, wildcat, northeast of the Cunningham pool in Kingman County and southwest of the Lerado field in Reno County, topped Topeka lime at 2,995 feet; Kansas City, 3,500 feet; had slight showings of oil at 3,558-60 feet and 3,590 feet; topped Chat at 4,037 feet; Simpson, 4,365 feet; Siliceous lime, 4,467 feet; oil stain and salty taste at 4,447-75 feet; ran Schlumberger, and was dry and abandoned at 4,535 feet, total depth.

McPherson County

Completions in McPherson County included four producers in the Graber pool and two in the Ritz-Canton field. Continental Oil Co. No. 3 Blair, SW NW SW section 21-21-1w, Graber area, had Hunton lime at 3,320 feet, was bottomed at 3,332 feet and, after acidizing with 4,000 gallons, made potential of 1,666 bbls. of oil.

Dickey Oil Co. and Gulf Petroleum Corp No. 7 Goering, SW NE SE section 17-21-1w, made potential of 1,360 bbls. of oil after treating with 4,000 gallons of acid. Top of Hunton lime was 3,319 feet.

Continental Oil Co. No. 2 A. Wenger, SW NW NW section 21-21-1w, had Hunton lime at 3,305 feet; total depth, 3,324 feet, and made potential of 1,031 bbls. of oil, with 100 bbls. of water. Same operator's No. 1 Kinblade, NE SE SW section 20-21-1w, was acidized with 4,000 gallons and made potential of 720 bbls. of oil. It found Hunton lime at 3,287 feet, had pay at 3,309-14 feet and was bottomed at 3,334 feet.

In the Ritz-Canton field, Bennett & Aikman and others No. 2 Sellers, SE NW NE section 31-19-1w, topped Kansas City lime at 2,325 feet; had

At the Kanotex Refining Co.'s plant at Arkansas City, Kans., R. Holmsten, cracking still foreman; G. Kirk, chief chemist; C. Wakefield, assistant superintendent; F. A. Deering, superintendent, are shown

Chat, the producing formation, at 2,923 feet, and was bottomed at 2,983 feet. It pumped 157 bbls. of oil in 24 hours; was acidized with 2,000 gallons and made potential of 250 bbls. of oil. Hutchinson Oil & Gas Co. No. 1-A Lewis, NW SE SW section 26-19-2w, topped Chat at 2,923 feet; total depth, 2,970 feet; and made potential of 80 bbls. of oil, with 20 per cent water.

The only new operation reported in McPherson County was Dickey Oil Co. and Gulf Refining Corp. No. 8 Goering, NE NE SE section 17-21-1w, a rotary rig.

Sumner County

A trio of oil wells were completed in the Wellington pool, Sumner County. Continental Oil Co. No. 3 Rothrock, CEL W half NW section 4-32-1w, had Chat at 3,649 feet; pay at 3,670 feet; total depth, 3,691 feet. It flowed 688 bbls. of oil in 24 hours; acidized with 3,000 gallons, and made potential of 1,204 bbls. of oil.

Stelbar Oil Corp. No. 4 Barlow B, C E half W half SE section 33-31-1w, made potential of 1,068 bbls. of oil after treating with 4,000 gallons of acid. Before acidizing, it flowed 175 bbls. of oil in 24 hours. Top of Chat was 3,653 feet; total depth, 3,699 feet.

Vickers Petroleum Co. No. 1 A. J. Markley B, SE SE SW section 32-31-1w, topped Chat at 3,670 feet and had pay at 3,688-96 feet; total depth, 3,701 feet. It was acidized and made potential of 169 bbls. of oil, with 10 bbls. of water.

Cowley County

Earl Wakefield and Mead Oil Co. No. 1 Napp, SW SW NW section 2-34-5, wildcat in Cowley County, had dry Bartlesville sand at 3,042-60 feet; topped Chat at 3,109 feet; bailed approximately 12 bbls. of oil in 15 hours at 3,142 feet, but was dry and abandoned at 3,217 feet, total depth.

In the Burden area, Lewis Production Co. No. 1 Sitton C, NE SW NE section 30-31-6, had showings of oil and gas in sand at 2,917-56 feet; water in sand at 2,990-3,000 feet, and was dry and abandoned at 3,018 feet, total depth.

In the Trees area, Trees Oil Co. No. 4 Littell, NE NW NE section 19-30-4, was dry and abandoned in lime at 2,926-3,006 feet, total depth.

New work in Cowley County: Lewis Production Co. No. 2 David, SW NW NE section 2-31-4, was moving in material; Elmer Ash and others No. 1 Bolack, NW NW SE section 22-32-6, wildcat, was a cellar; Stevens County Oil & Gas Co. No. 1-A Olds, NW cor. section 9-33-7, had spudded.

Woodson County

Two producers and one failure were completed in Woodson County. Oko Oil Co. No. 1 Wiede, NW NW SW section 32-23-15, Wiede pool, topped lime at 1,555 feet; was bottomed at 1,592 feet; acidized with 1,000 gallons and pumped 30 bbls. of oil in 24 hours. Same operator's No. 3 Hoagland, C N half NW NE section 2-24-14, Hoagland pool, pumped 20 bbls. of oil in 24 hours after acidizing with 2,000 gallons. It topped lime at 1,617 feet and was bottomed at 1,632 feet. Ward McGinnis No. 2 Wiede, SE NE SE section 31-23-15, topped lime at 1,542 feet; total depth, 1,586 feet; shot and acidized, but was dry and abandoned.

First reports of new work in Woodson County: Oko Oil Co. No. 4 Hoagland, SW SE SE section 35-23-14, drilling at 810 feet; Ward McGinnis No. 3 Wiede, SE SE NE section 31-23-15, drilling at 789 feet; Oko Oil Co. No. 2 Wiede, SW NW SW section 32-23-15, drilling at 500 feet; Elbar Corp. No. 6 Figge, SW NE SW section 27-23-14, machine.

Coffey County

Saco Oil Co. No. 2 Scott, NW SW NW section 13-23-14, Coffey County, topped lime at 1,603 feet; total depth, 1,625 feet; acidized with 3,000 gallons and pumped 48 bbls. of oil in 24 hours. Same operator's No. 3 Scott, NE SW NW section 13-23-14, Van Noy pool, topped lime at 1,585 feet; total depth, 1,625 feet; treated with 3,000 gallons of acid and pumped 20 bbls. of oil in 24 hours.

The only new work reported in Coffey County was at P. R. Hart No. 6 Hanna, C E half NW SW section 11-23-13, North Virgil area, drilling at 1,480 feet.

Greenwood County

Landon & Parrish No. 1 Eureka Bank, SW SW NW section 15-24-12, Hamilton pool, topped lime at 1,725 feet; had pay at 1,736-43 feet, total depth; acidized and shot and pumped 2 bbls. of oil in 24 hours.

Hollis and others No. 1 Boone, NE NE NW section 21-26-12, wildcatt, was dry and abandoned at 1,130 feet, total depth.

Shaffer & Howell No. 6 Schneider, NE SW NE NW section 15-23-13, an old well, was deepened from 1,617 feet to lime at 1,753-77 feet, total depth; acidized with 1,000 gallons, pumped 30 bbls. of oil and was recompleted.

Phillips Petroleum Co. and others No. 7 Agard, C SE NW section 14-24-9, was drilling at 665 feet. L. S. Bolwanz No. 1 Travelers Insurance, C SW SW section 23-26-10, wildcat, had spudded.

Sedgwick County

The following new work in Sedgwick County was reported: I. W. Murfin and others No. 1 Stark, NW NW SE section 12-25-2e, location; Empire Oil & Refining Co. No. 1 Kimel, NW cor. section 4-29-2w, wildcat, moving in material; E. B. Shawver No. 1 Furman, SW NE SE section 24-29-3w, wildcat, moving in material.

Chautauqua County

Griffin & Bell No. 15 Oliver, C E half W half NW section 1-32-10, Oliver pool, Chautauqua County, topped Oswego lime at 1,642 feet; total depth, 1,668 feet; acidized with 1,000 gallons and pumped 37 bbls. of oil in 24 hours.

The following new work in Chautauqua County was reported: Shaffer & Howell No. 1 Landon & Floyd, NE NE SW section 23-32-10, location; Sagamore Oil Co. and others No. 4 White, C SE NW section 15-32-12, an old well, rigging up to deepen; E. J. Shaffer No. 1 Nuckolls, NW cor. section 12-33-9, wildcat, drilling at 460 feet; A. M. Hugh & L. H. Wentz No. 1 Wells, SE SE NW section 10-33-10, wildcat, moving in material; Tuesday Oil Co. No. 1 Sturges, NW NE NE section 2-33-11, moving in material.

Dick Rogers, district superintendent of the natural gasoline department of the Empire Oil Refining Co., was on a visit to the company's new gasoline plant near Haven, Kans., when portrayed. His headquarters are in Wichita

Butler County

Richmond Drilling No. 3 Getter, C N half N half section 17-27-6, Butler County, was drilling at 720 feet on first report.

Ellsworth County

One new operation in Ellsworth County was reported. Spencer & Yarnell No. 1 Gemeinhardt B, NW SW SW section 31-17-10w, was building rig.

Rush County

C. B. Davis was rigging up rotary at No. 1 Brack, NW cor. section 23-16-16w, the only new test reported in Rush County.

Seward County

Helmerich & Payne No. 1 Hyde, C SW section 14-31-34w, an old wildcat in Seward County, plugged back from 2,850 feet to 2,745 feet, shot, produced 3,000,000 feet of gas and was recompleted.

Trego County

Central Commercial Oil Co. No. 1 Burkett, C SW section 15-11-22w, old wildcat in Trego County, was deepened from 3,889 feet to 4,239 feet, had a hole full of water and was abandoned. Watchorn Oil & Gas Co. No. 1 Galloway, C SE NE section 16-11-23w, topped Kansas City at 3,562 feet;

(Continued on Page 101)

ANNOUNCEMENT OF DISSOLUTION OF ASSOCIATION

Arthur G. McKee & Company and Petroleum Engineering, Inc., announce that they have terminated, by mutual consent, as of March 1, 1937, the business association which was formed between the said companies on August 5, 1931, in respect of the design and construction of natural gasoline and vapor recovery plants, and stabilizing and fractionating equipment pertaining to such plants.

On, and after March 1, 1937, Arthur G. McKee & Company and Petroleum Engineering, Inc., will each conduct its business as it did before entrance into the said association, except for commitments in the names of the two aforesaid companies, as associates, which will be fulfilled in accordance with the terms and provisions of such commitments.

ARTHUR G. McKEE & COMPANY
Engineers and Contractors
2422 Euclid Avenue
CLEVELAND, OHIO

PETROLEUM ENGINEERING, INC.
Philtower Building
TULSA, OKLAHOMA

Rocky Mountain Area

PROMISE OF TWO NEW POOLS IN LEA COUNTY, NEW MEXICO

By T. R. INGRAM

DENVER, Colo., Mar. 15.—Several important oil deals have recently been closed in Colorado. The Continental Oil Co. closed a contract for the purchase of crude from the new pool in Archuleta County opened by the William E. Hughes Estate. The Bay Petroleum Corp. will build a refinery near Denver to operate on Medicine Bow crude from Wyoming. The Colorado Oil Refining Co. plant is being rehabilitated preliminary to reopening. The South Park Oil Co. No. 1 Lemar, Hartsel district, showed for 25 bbls. a day at 4,070-74 feet.

In Wyoming the Murphy Oil Co. No. 6 Host, Quealy pool, an outside well, was completed for 9 bbls. an hour in the Sundance. The British American Oil Producing Co. will drill a deep test in Fremont County. The Wyalta Oil Co. abandoned its No. 4 Government in the Spindletop pool. Lance Creek may have another test to the Tensleep.

Montana had no completions or new locations.

NEW MEXICO

Two Lea County wildcats gave promise of opening new producing areas. Brown & Reynolds No. 1 Parcell, C NW SE section 8-21-38, drilled plug from 5-inch casing cemented at 4,200 feet, and the well blew in, a 10-minute head going over the crownblock after mud had been bailed down to within 70 feet off bottom. Later, the well cleaned itself and oil rose 4,000 feet in the hole, making one 5-minute head flow. Total depth is 4,365 feet, corrected, where pay was topped. Operators were expected to drill deeper into the pay section before completing. The wildcat is 12 miles southeast of the Hobbs pool, 6 miles northeast of the Hardy area and about three-fourths of a mile from the Andrews County, Texas, line.

Magnolia Petroleum Co. No. 1 State G, NW NW NE section 24-17-34, Lea County wildcat, was cleaning out following a shot and was reported swabbing 70 bbls. of oil daily. It is east of the Vacuum area.

The first well to be completed in the Hobbs field in several months was Stanolind Oil & Gas Co. No. 30-X Capps, SE section 3-19-38. It flowed 93 bbls. of oil naturally from pay at 4,148-4,203 feet; total depth, 4,205 feet. It flowed through open tubing and casing, and on this showing was given a 24-hour potential of 5,476 bbls. Is was acidized three times, with 2,000 gallons, 4,000 gallons and 6,000 gallons.

In the Sims area, Skelly Oil Co. No. 2 R. R. Sims, C NE SW section 3-23-37, flowed 851 bbls. of oil in 24 hours, after a shot, and was completed at 3,599 feet, total depth.

Maljamar Oil & Gas Corp. No. 8 Baish, C SW NW section 21-17-32, in the Maljamar area, Lea County, was shot with 20 quarts and swabbed 50 bbls. of oil daily. Total depth is 2,287 feet.

In the Monument area, Amerada Petroleum Corp. No. 4 Byrd, C NE NW section 12-20-36, was bottomed at 3,885 feet and flowed 520 bbls. of oil in six hours. Continental Oil Co. No. 3-A-17 State, C NW SW section 17-19-37, flowed at the rate of 58 bbls. of oil in one hour; total depth, 3,885 feet. Repollo Oil Co. No. 3 Byrd, SW section 11-20-36, had initial production of 999 bbls. of oil in 24 hours; total depth, 3,890 feet.

Amerada Petroleum Corp. No. 2-W State, C SW NE section 30-20-37, topped pay at 3,744 feet; total depth, 3,888 feet, and produced 63 bbls. of fluid, with 56 per cent basic sediment and water.

A completion in the Eunice field was Gulf Petroleum Corp. No. 4 Houston, C NW SE section 7-21-36. It flowed 285 bbls. of oil in eight hours, naturally. It was bottomed at 3,811 feet.

Another Eunice completion was Continental Oil Co. No. 4-D-11 State, C NE SW section 11-21-36. It topped pay at 3,793 feet; total depth, 3,890 feet, and flowed 168 bbls. of oil in 24 hours.

In the Cooper pool, Shell Petroleum Corp. No. 1 Guthrie, C SW SE section 34-23-36, produced 24,-191,000 feet of gas and was completed after plugging back from 3,928 feet, total depth, to 3,780 feet.

Another Lea County gas well was completed at El Paso Natural Gas Co. No. 1 Harrison, C NW NW section 7-25-37. It was bottomed at 3,558 feet; plugged back to 3,300 feet, acidized and produced 3,500,000 feet of gas.

One well was completed in Eddy County. It was Red Lake Oil Co. No. 8 State, SE NW SW section 22-17-28. It topped pay at 1,915 feet; total depth, 1,951 feet, shot and flowed 10 bbls. of oil in 24 hours.

Monument Area

Skelly Oil Co. No. 2 State F, C SW SE sec. 17-20-37. Drlg. 3,215 ft.
Amerada Pet. Corp. No. 2 Anderson, C SE SW sec. 8-20-37. T.D. 3,860 ft.; est. 15,000,000 ft. gas; spraying oil.
Amerada Pet. Corp. No. 2 Phillips, C NE SW sec. 33-19-37. T.D. 3,910 ft.; acidized; flowed 57 bbls. oil in 24 hrs.
Gulf Oil Corp. No. 3 Sunshine, C NE SW sec. 30-20-37. T.D. 3,837 ft.; acidized; flowed 84 bbls. in 24 hrs.
Oil Well Drlg. Co. No. 2 Wood-State, NW sec. 16-20-37. Drlg. 3,445 ft.
Tide Water Oil Co. No. 2-I State, C NE SW sec. 16-20-37. Drlg. 3,658 ft.
Anderson-Prichard Oil Co. No. 7 Britt, SE NW SE sec. 7-20-37. T.D. 3,805 ft.; tested 7,500,000 ft. gas.
Tide Water Oil Co. No. 2 State I, C NE SW sec. 16-20-37. Cellar and pits.
Amerada Pet. Corp. No. 3 Byrd, sec. 3-12-20. Drlg. 3,-774 ft.
General Crude Oil Co. No. 1-G State, sec. 16-20-37. Drlg. 3,805 ft.
Gulf Oil Corp. No. 3 Anderson, sec. 8-20-37. T.D. 3,870 ft.; flowed 99 bbls. in 1 hr.
Magnolia Pet. Co. No. 2 Cary, sec. 21-22-37. Drlg. 3,500 ft.
Texas Co. No. 1 Cook, SW NE NE sec. 32-19-37. Drlg. 2,772 ft.
Continental Oil Co. No. 2 Britt B, sec. 18-20-37. T.D. 3,880 ft.; testing.
Continental Oil Co. No. 3 Britt B, sec. 18-20-37. T.D. 3,748 ft.; W.O.C.
Phillips Pet. Co. No. 1 Mexico, NE cor. sec. 18-20-37. T.D. 1,180 ft.; W.O.C.
Continental Oil Co. No. 11 Sanderson A, C SE SE sec. 11-20-36. Drlg. 2,720 ft.
Gulf Oil Corp. No. 2 Hatchett, C SW NW sec. 33-19-37. Drlg. 2,310 ft.
Gulf Oil Corp. No. 3 Whitmore, C SE NW sec. 8-20-37. T.D. 3,095 ft.; W.O.C.
Skelly Oil Co. No. 2 Van Etten, C SW SW sec. 9-20-37. Drlg. 2,517 ft.
Skelly Oil Co. No. 3 Van Etten, C SE SW sec. 9-20-37. T.D. 1,138 ft.; set 9⅝-in. csg.; W.O.C.
Gulf Oil Corp. No. 3 Graham-State F, C NW SE sec. 36-19-36. Drlg. 3,499 ft.
Amerada Pet. Corp. No. 6 Andrews, C SW SW sec. 12-20-36. Drlg. 2,480 ft.
Gulf Oil Corp. No. 1 Orcutt C, C SW SE sec. 36-20-36. Drlg. 3,815 ft.
Barnsdall Oil Corp. No. 7 Cooper, C NW SW sec. 7-20-37. T.D. 3,885 ft.; testing.
Gulf Oil Corp. No. 4 Anderson, C NW NE sec. 17-20-37. T.D. 3,805 ft.; W.O.C.
Ohio Oil Co. No. 3 State-McGrail, C NE SW sec. 26-19-36. Drlg. 2,915 ft.
Gulf Oil Corp. No. 4-F Graham-State, C SW SE sec. 36-19-36. Drlg. 2,228 ft.
Amerada Pet. Corp. No. 5 Byrd, C SE NW sec. 12-20-36. Drlg. 2,266 ft.
Amerada Pet. Corp. No. 1 Laughlin, W¼ NW NW sec. 9-20-37. T.D. 2,450 ft.; W.O.C.
Gulf Oil Corp. No. 5 Anderson, C SE NW sec. 17-20-37. Derrick.
Phillips Pet. Co. No. 2 Mexico, C SW NE sec. 18-20-37. Cellar and pits.
Superior Oil Corp. No. 1 State B, C NE SE sec. 13-20-36. Drlg. 300 ft.
Amerada Pet. Corp. No. 4 Lambert, C SE NE sec. 6-20-37. Drlg. 1,712 ft.
Ohio Oil Co. No. 2 Laughlin, C SE NW sec. 9-20-37. Drlg. 1,280 ft.
Humble O. & R. Co. No. 4 Laughlin, C SW SE sec. 4-20-37. Drlg. 3,705 ft.
Amerada Pet. Corp. No. 4 Phillips, C NW NE sec. 1-20-36. Derrick.
Amerada Pet. Corp. No. 1-X State, C NW SW sec. 16-20-37. Derrick.
Amerada Pet. Corp. No. 8 Weir, C NW NW sec. 35-19-36. Spudded.
Barnsdall Oil Co. No. 8 Cooper, C SE SE sec. 12-20-36. Bldg. derrick.
Continental Oil Co. No. 16-C-1 State, C SW NW sec. 16-20-37. Derrick.
Gulf Oil Corp. No. 1 Bates, C SE SE sec. 26-19-36. Drlg. 1,160 ft.
Gulf Oil Corp. No. 1-D Orcutt, C NW NE sec. 13-20-36. Derrick.
Phillips Pet. Co. No. 1 Edna-State, C NW NW sec. 30-20-37. Derrick.
Phillips Pet. Co. No. 1 Mexico-State, C NE NE sec. 30-20-37. T.D. 210 ft.; W.O.C.
Repollo Oil Co. No. 4-A Phillips, NW SW sec. 31-19-37. Derrick.
Tide Water Oil Co. No. 2 Laughlin, C NE SW sec. 4-20-37. Bldg. derrick.
Amerada Pet. Corp. No. 3-V State, NE sec. 36-19-36. Location.
Amerada Pet. Corp. No. 3-F State, SW sec. 36-19-36. Location.
Amerada Pet. Corp. No. 5 Byrd, SW sec. 12-20-36. Loc.
Stanolind O. & G. Co. No. 3 Gillully, SW sec. 33-20-37. Location.
Shell Pet. Corp. No. 3-M State, NE sec. 1-21-35. Location.

Chaves County

J. & L. Drlg. Co. No. 1 Hurd, C SE NW sec. 14-11-26. T.D. 190 ft.; R.U.R.
Elliott No. 1 State, NW sec. 16-8-23. Drlg. below 1,000 ft.
English & Harmon No. 1 Billingslea, SE sec. 9-15-29. Moving in material.
Warman Oil Co. No. 1 Weldan & Hoar, sec. 9-14-25. T.D. 1,728 ft.; fishing.

Eunice Area

Getty Oil Corp. No. 1 State D, C SE NE sec. 32-20-37. T.D. 3,860 ft.; S.D. for orders.
Gulf Oil Corp. No. 4 Collins, C NE SW sec. 14-21-36. T.D. 3,880 ft.; swabbing.
Gulf Oil Corp. No. 4 Leonard, C SW NE sec. 22-21-36. T.D. 3,905 ft.; P.B. to 3,892 ft.; testing.
Continental Oil Co. No. 18-B-4 Meyer, C NW NE sec. 4-21-36. T.D. 3,840 ft.; testing.
Jim Murray No. 4 State-Wallace, sec. 3-21-36. Cellar.
Shell Pet. Corp. No. 3 State K, C SW NE sec. 36-20-36. Drlg. 3,513 ft.
Gulf Oil Corp. No. 1 Bell-Ramsey B, C SW SW sec. 29-20-37. Drlg. 3,155 ft.
Gulf Oil Corp. No. 5 Leonard, C NE NE sec. 22-21-36. Coring 2,864 ft.
Amerada Pet. Corp. No. 3-W State, C SW NE sec. 30-20-37. Drlg. 3,292 ft.
Amerada Pet. Corp. No. 4-W State, C SE SE sec. 30-20-37. Drlg. 1,685 ft.
Continental Oil Co. No. 7-D-15 State, C NW SE sec. 15-21-36. T.D. 3,690 ft.; set csg.
Gulf Oil Corp. No. 12-C Arnott-Ramsey, C NW SE sec. 21-21-36. Derrick.
Shell Pet. Corp. No. 2-H State, CWL NE NE sec. 13-21-35. Drlg. 1,634 ft.
Humble O. & R. Co. No. 11 State-Aggies, C NE NE sec. 31-20-37. Drlg. 3,650 ft.
Atlantic Ref. Co. No. 5 State L, C NW NW sec. 3-21-36. Drlg. 2,695 ft.
Two States et al No. 1 State, C SE NW sec. 11-21-36. T.D. 2,878 ft.; S.D. for fuel.
Gulf Oil Corp. No. 2 White, C NE SE sec. 25-20-36. R.U.R.
Texas Co. No. 6 Lilu-Lands, C NW NE sec. 20-20-37. Rigging up rotary.
Mid-Continent Pet. Corp. No. 1 Reener, C NW NW sec. 29-20-27. Drlg. 1,095 ft.
Texas Co. No. 5 State-Aggies, SE NE SE sec. 31-20-37. Derrick.
Tide Water Associated Oil Co. No. 1 Marshall, C SW NE sec. 13-21-36. Derrick.
Continental Oil Co. No. 14-B-6 Lockhart, C SW SW sec. 14-21-36. T.D. 1,440 ft.; set csg.
Continental Oil Co. No. 15-D-8 State, C SE SE sec. 15-21-36. Drlg. 425 ft.
Ohio Oil Co. No. 6 McDonald, C SE SW sec. 16-22-36. Cellar.
Oil Well Drlg. Co. No. 1 State A, C NW NW sec. 16-22-36. Drlg. 1,432 ft.
Stanolind O. & G. Co. No. 1 Owen, NW sec. 3-22-37. Loc.
Devonian Oil Co. No. 2 State, SE sec. 3-21-36. Location.

Sims Area

Skelly Oil Co. No. 1 R. R. Simms C, C SE SW sec. 3-23-37. T.D. 3,388 ft.; drlg. by at 3,344 ft.
Penrose & Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 1,150 ft.; S.D.O.
W. H. Street et al No. 1 Wood, C W½ SE NE NE sec. 22-22-37. T.D. 3,654 ft.; flowed 150 bbls., 24 hrs.
J. E. Farrell No. 1 Walden, C sec. 15-22-37. T.D. 3,686 ft.; cleaning out.
J. E. Farrell No. 1-A Walden, C SW NW sec. 15-22-37. T.D. 3,551 ft.; S.D.
Skelly Oil Co. No. 2 Ella Simms, C SW NE sec. 3-23-37. Drlg. 3,511 ft.
Skelly Oil Co. No. 4 Baker, C SW NW sec. 27-22-37. T.D. 2,584 ft.; set csg.
Texas Co. No. 1 Falby, C NE NW sec. 8-22-37. Loc.

Cooper Area

Southern Oil Corp. No. 1 Gates, C SW NW sec. 23-24-26. T.D. 3,514 ft.; S.D. for orders.
Continental Oil Co. No. 1 Danciger, C NW NE sec. 8-22-36. Set 7-in. csg. 1,687 ft.; T.D. 1,689 ft.
Amerada Pet. Corp. No. 3 Isabell, C SW NE sec. 15-21-36. Bldg. drk.

Lea County—Miscellaneous

Plains Prod. Co. No. 4 Knight, C SW SW sec. 22-24-37. T.D. 3,275 ft.; set csg.
Culberson-Irwin & Stovall No. 2 Stuart, NW SE NE sec. 20-25-7. T.D. 3,421 ft.; swabbing 75 bbls. oil daily.

Brown & Reynolds No. 1 Parcell, C NW SE sec. 8-21-38. Wildcat; T.D. 4,373 ft.; T.D. 4,365 ft.; showing oil.
Amon G. Carter No. 2 Elliott, C NE NW sec. 23-22-37. T.D. 3,622 ft.; fishing.
Magnolia Pet. Co. No. 1 State G, NW NW NE sec. 24-17-34. T.D. 4,905 ft.; P.B. 4,775 ft.; swabbing 70 bbls. oil per day.
Culberson-Irwin & Stovall No. 3 Stuart, NE SE SW sec. 10-25-37. Cellar and pits.
Continental Oil Co. No. 1 Wantz, C SW SW sec. 21-21-37. T.D. 3,815 ft.; testing.
Ohio Oil Co. No. 5 State-McDonald, sec. 16-22-36. T.D. 4,500 ft.; to deepen.
Stanolind O. & G. Co. No. 1 Meyers, sec. 22-24-37. Drlg. 3,497 ft.
Texas Co. No. 1 Alexander, sec. 5-21-37. Drlg. 3,535 ft.
Sun Oil Co. No. 2 Stewart, C SW NE sec. 15-25-37. Rigging up rotary.
Tide Water Associated Oil Co. No. 2 Walden, C SW NE sec. 21-22-37. Drlg. 2,300 ft.
Continental Oil Co. No. 1 Skaggs Permit, C NE SE sec. 24-20-37. Wildcat; T.D. 3,748 ft.; reaming.
Tide Water Associated Oil Co. No. 2 Walden, C SW NE sec. 21-22-37. Drlg. 2,700 ft.
Shell Pet. Corp. No. 2 Black, C SW SE sec. 21-24-37. Drlg. 3,500 ft.
Texas Co. No. 3 Sheppard B, SW NE NE sec. 5-26-37. Drlg. 3,295 ft.
J. L. Perry No. 1 Elliott, SE cor. sec. 19-21-37. Standardizing.
Samedan Oil Co. No. 3 Hughes, sec. 4-23-37. T.D. 1,290 ft.; setting csg.
Texas Co. No. 2 Black, sec. 21-24-37. T.D. 1,322 ft.; set csg.
Gulf Oil Corp. No. 1 Hardy, C SE SW sec. 20-21-37. Drlg. 90 ft.
Mack & Stauffer No. 1 Grizzell, C NW NE sec. 8-22-37. Drlg. 930 ft.
Anderson-Prichard Oil Corp. No. 1 Wells, C SE SE sec. 5-25-37. Cellar and pits.
Herschback et al No. 1 Alston, C SW NE sec. 31-17-37. Wildcat; T.D. 276 ft.; reaming hole.
J. C. Clower No. 2 Turner, SW SW SE sec. 29-21-37. Drlg. 1,935 ft.
Continental Oil Co. No. 4 McCallister A, C N½ NE SE sec. 24-26-36. Drlg. 2,215 ft.
Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 3,470 ft.; fishing.
Gulf Oil Corp. No. 1 Mattern B, NE NE SE sec. 30-21-37. Drlg. 1,330 ft.
Ohio Oil Co. No. 1 Grizzell, C SW SE sec. 5-22-37. R.U.
Mid-Continent Pet. Corp. No. 1 Boren, C NE NE sec. 20-22-36. T.D. 38 ft.; S.D.
Stanolind O. & G. Co. No. 2 Myers, SW sec. 4-24-37. Loc.
Stanolind O. & G. Co. No. 3 Myers, SE sec. 4-24-37. Loc.

Eddy County

Etz Bros. No. 3 State, sec. 16-17-30. T.D. 3,252 ft.; swabbing.
McGinley & Harwell No. 7 Mann, SW cor. sec. 4-18-27. T.D. 2,285 ft.; testing.
Flynn, Welch & Yates No. 75 State, C E½ SE SE sec. 10-19-28. T.D. 2,135 ft.; S.D.O.
Flynn, Welch & Yates No. 1 Gissler, SW SE SW sec. 14-17-30. T.D. 3,503 ft.; swabbing and testing.
Adams et al No. 1 Page, sec. 15-21-18. Wildcat; machine.
Republic Prod. Co. No. 7 Russell A, NW SE NW sec. 18-17-31. Drlg. 2,970 ft.
Republic Prod. Co. No. 3 Robinson Permit, C NE NE sec. 27-17-29. Drlg. 2,180 ft.
Barnsdall Oil Co. No. 5 Dodd, sec. 22-17-29. Drlg. 2,350 ft.
Flint Prod. Co. No. 1 Flint, sec. 14-17-30. T.D. 3,459 ft.; flowed 150 bbls., 24 hrs.; reacidized; flowed 180 bbls. in 6 hrs.
William Dooley No. 2 Hatchett, SW SW NE sec. 14-20-26. T.D. 80 ft.; S.D.
Nells Wills et al No. 1 Chase, C NW SW sec. 6-20-30. Wildcat; drlg. 845 ft.
H. C. Wells et al No. 1 State, NW SW NW sec. 19-20-30. Wildcat; drlg. 650 ft.
H. & W. Drlg. Co. No. 1 Forgarty, C SW SW sec. 14-23-29. Wildcat; T.D. 195 ft.; set 8¼-in. csg.
Flint Prod. Co. No. 1-B Flint, sec. 20-17-30. Location.
Murchison No. 1-B State, SE sec. 16-17-30. Location.

Roosevelt County

Clovis Corp. No. 2 Wilmes, C SE NE sec. 17-2s-30e. S.D. 2,500 ft.
Wirt Franklin and Flynn, Welch & Yates No. 1 Catts, C NW NW sec. 28-3n-30e. T.D. 5,200 ft.; fishing.

Otero County

George Muldey No. 1 State, SW cor. sec. 11-25-8e. Drlg. 250 ft.
O. K. Hearte No. 1 Hattie Evans, NW NW SW sec. 22-24-12. O.W.D.D.; wildcat; S.D. 2,000 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 North Albuquerque, NE SE NW sec. 19-11n-4e. S.D. 3,000 ft.; M.I.R.

McKinley County

S. Dysart et al No. 1 Bouton, NW NE sec. 14-14n-10w. T.D. 1,390 ft.; pulled 4¾-in. and S.R. to bottom.

COLORADO

Adams County

The Glenridge Oil Corp. No. 1 Hills, a test in the Denver Basin near Watkins, 24 miles east of Denver, which resumed three weeks ago after overhauling rig, is reaching an interesting depth. At 4,320 feet it is drilling in the Hygiene formation and samples show some oil under acid treatment and bailer has gas bubbles. The first objective in which oil may be expected is in a sand in the base of the Hygiene. The 6¼-inch was set at 4,300 feet.

Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 37-3s-64w. Drlg. 4,320 ft.

The Bay Petroleum Corp., through President M. H. Robineau, has purchased a tract of 12 acres on the Brighton Road, north of Denver, from the Mountain States Mixed Feed Co., and is calling for bids on the construction of a topping plant and a Dubbs cracking unit with a charging capacity of 1,600 bbls. daily. The location is directly across the Brighton Road from the refinery of the Continental Oil Co. The company, which is a Delaware corporation, recently moved its headquarters from Sidney, Neb., to Denver. The company owns and operates 21 filling stations in Nebraska and a small topping plant at Cheyenne. C. U. Bay, of Bridgeport, Conn., is financially interested in the company and H. E. Armitage is secretary and treasurer.

A phase of the deal which is attracting considerable attention is that the company will obtain its crude from the Medicine Bow and Rock River fields in Wyoming, through a deal with the Ohio Oil Co. The contract is reported to run for five years. The Medicine Bow field is owned jointly by the Ohio Oil Co. and the Standard Oil Co. of California. Recently the Standard Oil Co. established offices in the Rocky Mountain states preliminary to opening bulk wholesale stations. An arrangement was reported whereby the Standard will have its crude refined at Parco by the Sinclair Refining Co. The plant of the latter is at present undergoing extensive improvements. The Ohio and California companies recently built a stabilizing plant at Medicine Bow to condition the high-gravity crude for shipping purposes. Apparently the Ohio deal with the Bay interests will provide a market for some of its portion of the Medicine Bow production.

R. M. Hardwick, of Denver, has acquired control of the plant of the Colorado Oil Refining Co. of Federal Boulevard, north of Denver, and is overhauling equipment with the expectation of resuming crude runs within the next 30 to 60 days. The plant has been idle for some time. Crude supply probably will be obtained from the Osage field in Wyoming.

Archuleta County

The marketing of oil from the new Gramps (Price) pool southeast of Pagosa Springs and north of the New Mexico boundary will begin about April 1 under an agreement between the William E. Hughes Estate and the Continental Oil Co. The full extent of the deal was not dis-

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closed, but W. H. Ferguson, executive vice president of the Continental Oil Co., confirmed the report and said that a limited quantity of crude will be purchased by the company and loaded on tank-cars at Chama and shipped to its refinery at Denver. The pool was discovered two years ago and last year the estate drilled a number of wells located with a view to outlining the productive area. Locations of these wells and depths drilled were not reported, but that an important pool was discovered is generally recognized. Two wells were drilled to the top of the Morrison. One of these gauged 1,920 bbls. in 24 hours from eight sands in the Dakota series. The wells completed were reported running from 500 bbls. to better than 2,300 bbls. each initially, based on short swabbing tests. Most of the wells are approximately in section 24-33n-2e. All are on fee land owned by the estate. A 14-mile 4½-inch pipe line was constructed during the winter from the field to the Denver & Rio Grande Western Railroad at Chama, a 25,000-bbl. tank was erected in the field and all the wells electrically equipped for pumping.

Huerfano County

S. W. Pressey No. 1 Ojo, SW NE sec. 10-29s-69w. Drlg. 3,310 ft.

Las Animas County

Garcia Corp. No. 1 McClung, NE NW SE sec. 19-33s-61w S.D. 1,816 ft.; prob. abd.

Lincoln County

Consolidated Smelting & Metals Corp. No. 1 Hancock, NE NE SW sec. 7-17s-52w. T.D. 2,165 ft. in sh.; C.O. caves; S.O. in lower Morrison at 2,076 ft.

Moffat County

Mountain Fuel Supply Co. No. 1 Donnell, C SE NE sec. 31-12n-97w. Ready to spud.

Anderson-Kerr Drlg. Co. et al No. 1 Govt., C SE SE sec. 19-9n-99w. Prep. to run 12½-in. cave string to 1,350 ft. to carry.

Morgan County

Swisher et al No. 1 Lunt, SE cor. sec. 3-4n-60w. T.D. 1,718 ft.; C.O. to bottom; W.O. decision whether to acidize or shoot.

Park County

The South Park Oil Co. No. 1 Lemar, on the south dome of the Hartsel anticline, had a good show of light oil in sandy shale at 4,070-74 feet. It bailed at the rate of 25 bbls. per day. After testing, drilling was resumed. This well is located 3 miles south of the same company's No. 1 State, which has had several important shows of oil and gas. The drilling is about 1,900 feet shallower on the south dome than on the dome to the north.

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75. Drlg. 4,084 ft.

South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. S.D. 5,705 ft.

WYOMING

Albany County

The Murphy Oil Co. No. 6 Holst, NW NE SE section 13-17n-77w, on the Quealy dome, was completed as a Sundance producer at a total depth of 3,961 feet and made 9 bbls. an hour initial production. This is an outside well on the north, being a north offset to No. 2 Holst, and is the second well to be drilled to the Sundance. Its No. 6 Holst found some production in the Sundance, but was plugged back to produce the Dakota for the present.

Murphy Oil Co. No. 3 Wilson, SW NW SW sec. 18-17n-76w. Cmtd. 12½-in. at 145 ft.; W.O.C.

Big Horn County

Stock Oil Co. No. 1-B Allen, Lot 52, sec. 32-56n-97w. Drlg. 3,871 ft. in barren L.

Ohio Oil Co. No. 1 Baker-Byron, SE NW sec. 23-56n-97w. Drlg. 2,689 ft.

Ohio Oil Co. No. 1 State, NE cor. Lot 38, sec. 36-56n-97. T.D. 5,418 ft.; W.O. acid; small well on swbg. test in Embar-Tensleep at 5,331-5,418 ft.

Campbell County

G. J. Sherin et al No. 1 Rodes, NE SE SW sec. 24-49n-74w. T.D. 384 ft. C.D.; prep. to resume.

Carbon County

Ohio Oil Co.-California Co. No. 2 Kyle, C SE SE sec. 26-21n-79w. Drlg. 2,882 ft.

Ohio Oil Co.-California Co. No. 4 Union Pacific, C SW SW sec. 25-21n-79w. Drlg. 1,558 ft.

Ohio Oil Co. No. 1 H.&C., SE SE SW sec. 35-20n-78w. T.D. 3,230 ft.; drlg. plug.; top sat. in Sundance 3,225 ft.

Ohio Oil Co. No. 7 H.&C., C NW sec. 2-19-78. T.D. 5,671 ft.; wtr. in Tensleep; P.B. to test S.O. 5,630 ft.

Converse County

Wyoming Southern Oil Co. No. 2 Salisbury, NE NW SE sec. 27-32n-69w. Drlg. 400 ft.

Fremont County

The British American Oil Producing Co., which was one of the successful bidders on Indian tracts on the Pilot Butte dome at recent sale, and which also holds a permit on 19,000 acres in the Sheldon district, has contracted with Manning & Martin, Inc., for a deep rotary test in Township 3n, Range 1w. Location has not yet been definitely decided upon.

Tropic Oil Co. No. 1 Govt., C SE SW sec. 34-27n-90w. S.D. 3,160 ft.

Goshen County

The Ohio Oil Co. No. 1 Red Cloud Cattle Co., NW NE NW section 28-29-62w, in the Jay Elm district, was plugged and abandoned at 3,090 feet. It missed the Tensleep, but stopped before reaching the granite. This is the second wildcat drilled in the district by the Ohio Oil Co., the first one on the Waggoner land in C NE NE section 14-28n-63, being abandoned in granite at 3,052 feet. Both wells started in the Tertiary and went from that formation directly into the red beds without encountering the Cretaceous. No. 1 Red Cloud, which is 4 miles northeast of No. 1 Waggoner, had the red beds at 1,690-2,940 feet.

Laramie County

Amerada Pet. Corp. No. 1 Morton, C SW SW sec. 13-13n-68. Drlg. 9,391 ft.

Lincoln County

Place Oil Co. No. 1 Davis, SE SE SE sec. 9-26n-113w. S.D. 750 ft.

Johnson County

Carter Oil Co. No. 3 Rider, C NW SE sec. 17-48n-82w. Loc.

Natrona County

The Wyalta Oil Co. No. 4 Government, NW NW section 5-29n-81w, Spindletop pool, running tubing to test Sundance sand at 1,040-1,115 feet.

The Empire State Oil Co. has begun deepening its No. 3-U, an old producer on the South Casper Creek dome.

Empire State Oil Co. No. 3-U, SE NE sec. 33-34n-83w. Drlg. 1,860 ft.

Wyalta Oil Co. No. 5 Govt., SW SW sec. 30-30n-81w. Drlg. at 300 ft.; 10-in. at 82 ft.

Wyalta Oil Co. No. 6 Govt., NW NW sec. 5-29n-81w. Bldg. road to loc.

Niobrara County

The Argo Oil Co. No. 3 Ford, SW cor. NW section 33-36n-65w, Lance Creek, an outside well, reported a completion three weeks ago, made 2½

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bbls. per hour on a short pumping test, but has not yet been tested for proration purposes.

The Ohio Oil Co. No. 5 Leo, which is located three-fourths of a mile east of production and is an important test of the Sundance horizon on that side, may be drilled to the Tensleep, it is unofficially reported. Only one well has been drilled to the Tensleep in Lance Creek and nothing of an official nature was given out regarding same. This was the Ohio's No. 5 Converse Sheep, C SE SW section 32-36-65. This well was reported to have made 200 bbls. an hour in a night test at below 4,600 feet and was generally estimated as good for 3,000 to 4,000 bbls. a day of better than 40-gravity crude. Subsequently the Tensleep was reported to have been cemented off and the well put on production from the Sundance.

Continental Oil Co. No. 3-B Schuricht, C SE SE sec. 6-35n-65w. Drlg. 3,367 ft. in hd. sdy. sh.; sat. sd. (probably Dakota) at 3,295-3,301 ft.
J. M. Huber Corp. No. 1 Midwest, SE SE SW sec. 27-36n-65w. Spdg.
Holly Dev. Co. No. 1 Novick, NE SE SW sec. 6-35n-65. T.D. 3,990 ft. hd. L.; cmtd. 500 ft. 5-in. lnr.; prep. to drill plug.
Ohio Oil Co. No. 7 Putnam, NE NE SW sec. 33-36n-65w T.D. 4,020 ft.; tstg.
Ohio Oil Co. No. 5 Leo, NW NW SW sec. 35-36n-65w. Drlg. 2,620 ft.

Park County

General Pet. Corp. No. 1 Govt., NW NW NW sec. 33-47-100. T.D. 5,687 ft.; cmtd. 9⅝-in. at 5,658 ft.; W.O.C.

Platte County

Dividend O. & R. Co., Inc., No. 1, CSL NW SW sec. 17-24n-66. S.D. 2,385 ft.; C.D.

Weston County

Charles Stough No. 6, C SE NW sec. 4-46n-62w. Drlg. 190 ft

MONTANA

Carbon County

Miracle Oil Co. No. 2 Govt., CWL NE SE sec. 3-6s-23e. S.D. 1,260 ft.; temp.
Ohio Oil Co. No. 1 N. P., SE NE SW sec. 11-7s-21e. T.D. 5,772 ft.; P.B. to 4,470 ft.; cmtd. 6⅝-in. at 4,436 ft.; drlg. plug.

Fallon County

Montana-Dakota Utilities Co. No. 3 Smith No. 1, Unit 8, C SE NW sec. 8-4n-62e. T.D. 6,765 ft.; fsg.; oil in last 15 ft., not coml.; will D.D.
Nagasco Corp., Inc., No. 1, C SE sec. 24-5n-60e. Drlg. 560 ft.

Judith Basin County

Fletcher E. Hunt No. 3 Govt., NW SE NE sec. 30-14n-15e. Drlg. 1,325 ft.; C.D.

Glacier County

Kately, Drumheller-Ward No. 5, C Lot 4 (SE SE) sec. 10-34n-6w. Drlg. 1,200 ft.; Colo. 540 ft.; 10¾-in. 559 ft.
Wm. Hanlon, Agt. No. 2 All.-128, C NW SE sec. 12-32n-6w. Rig.; W.O. engine.
Dakota-Montana Oil Co. No. 1 Tribal-136, C NE NE sec. 15-34n-6w. T.D. 1,995 ft.; fsg.
Wm. Hanlon, Agt. No. 2 All.-131, C Lot 9 (SW NW) sec. 7-32n-5w. Drlg. 295 ft.
Glacier Prod. Co. No. 1 Abraham, C SW SE sec. 19-34n-5w. Drlg. 1,495 ft.; Colo. 410 ft.; 10¾-in. 455 ft.
Glacier Prod. Co. No. 5 Seeba, CWL NW NW sec. 2-34n-6w. Drlg. 1,670 ft.
Glacier Prod. Co. No. 1 Williams, C SW SE sec. 21-33n-5w. Drlg. 2,590 ft.
Dr. Peter Potter No. 2 All.-125, NW NE NE sec. 12-32n-6w. R.U.
R. C. Tarrant No. 1 Kirst, C NW SW sec. 18-34n-5w Drlg. 1,710 ft

Petroleum County

C. B. Canfield No. 1 Govt., CEL SE NE sec. 21-17-24e. (Black Butte); drlg. 750 ft.
H. C. Rowland No. 1 Kalispel, NE NE SE sec. 35-14n-25e. Drlg. 711 ft.

Park County

Ben W. Ryan et al No. 1 Burgess, SE SW NW sec. 28-2s-11e. S.D. 610 ft.

Phillips County

R. G. Parrent No. 1 Hartman, C NW SE sec. 12-24n-25e. S.D. 862 ft.
City of Malta No. 1, C SE SE sec. 18-30n-30e. T.D. 1,120 ft.; rebldg rig burned down.

Toole County

All drilling wells in the Kevin-Sunburst field continued shut down on account of the weather

UTAH

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. T.D. 6,363 ft. in upper Hermosa; prep. to resume.
Columbia Crude Corp. No. 1 Rath, NW SW SW sec. 12-35-20e. T.D. 2,138 ft.; recmtg. at 2,045 ft.

NEBRASKA

Lincoln County

Smith & Wright No. 1 Hansen, C SW NW sec. 24-15n-31w. Res. at 800 ft. in gr. L. after recovering bit.

Sioux County

J. M. Huber Corp. No. 1 Morgan, C SW SW sec. 32-35n-56w. T.D. 2,700 ft.; C.O. to resume.

Boasts Cheapest Gas

AMARILLO, Tex.—Amarillo boasts the cheapest domestic gas in the United States. The new rate schedule runs from 25 cents net for small users down to 6 cents a thousand feet for the largest industrial users. The previous schedule ran from 27 cents net to 8 cents.

R. E. Wertz, president of Amarillo Gas Co., offered the reductions, which were accepted by the city commission.

"We are here to give the best service at the lowest possible rate," declared Mr. Wertz, who estimated the reduction would effect an annual saving for consumers of approximately $45,000 to $50,000.

Crude Oil Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ending February 27 totaled 288,121,000 bbls., according to the Bureau of Mines, an increase of 547,000 bbls., comprising an increase of 633,000 bbls. in stocks of domestic crude but a decline of 86,000 bbls. in stocks of foreign crude. Daily average crude runs to stills were about 3,085,000 bbls., or arout 10,000 bbls. above the level of the previous week. Imports, which had declined to zero for the week ending February 20, averaged 32,000 bbls. daily.

STOCKS OF CRUDE PETROLEUM—FEBRUARY

Grade of crude oil—	Feb. 27	Change from Feb. 20
Pennsylvania Grade	4,055,000	— 72,000
Other Appalachian	882,000	— 24,000
Lima-N. E. Indiana-Michigan	851,000	+ 4,000
Illinois-S. W. Indiana	9,570,000	+ 23,000
N. Louisiana and Arkansas	10,255,000	—4,000
West Texas and S. E. N. w Mexico	28,397,000	+237,000
East Texas	21,814,000	+57,000
Other Mid-Continent	114,065,000	—51,000
Gulf Coast	24,834,000	+436,000
Rocky Mountain	25,89 ,000	+ 1,000
California	29,265,000	+10 ,000
Foreign	1,334,000	— 86,000
Total reported weekly	270,771,000	+497,000
Estimates of unreported stocks	17,350,000	+ 50,000
Total stocks	288,121,000	+547,000

Springfield, Ontario, System

SPRINGFIELD, Ontario.—Central Pipe Line Co. of Chatham, Ontario, has completed installation of a distributing system, following completion of 4 miles of 4-inch transmission line connecting with the company's main transmission line. Springfield is an incorporate village of about 700 population.

DON'T GUESS—MISTAKES ARE COSTLY!

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California Field Report

By
L. P. STOCKMAN

WILMINGTON AND SEGUNDO DUE FOR A FLOCK OF WELLS

LOS ANGELES, Calif., Mar. 15.—The next 30 days should see the completion of numerous new wells in the Wilmington district of Los Angeles Basin and nine new wells in El Segundo field. Due to the larger cost involved, operators in the El Segundo field are proceeding more cautiously than those at Wilmington, but as soon as the trend of the structure is known an increase in drilling operations at El Segundo is looked for. Union Oil Co., by coring an excellent oil sand in No. 1 El Segundo, is believed to have substantially extended the southern limits of production in the El Segundo field. The company, after coring this oil sand at 7,685 feet, landed a 7-inch water string at 7,646 feet. The well is scheduled to be drilled ahead and given a production test within 10 days. In contrast with the Conglomerate from which other wells in the field are producing, Union Oil Co. cored a normal, well saturated oil sand. The size of the well depends on how much oil sand is present and whether the oil sand immediately overlies the Schist or is separated from the latter by a body of Conglomerate. The company has started road building and grading operations for No. 2 El Segundo, which will be drilled one location east of No. 1.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	March 4		February 25			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	176,726	77,391
Gasoline	.....	.....	91,066	13,009	286,012	831,413
Kerosene	.....	.....	.....	.....	.....	385,956
Foreign exports:						
Crude oil	390,670	55,810	617,198	88,171	1,922,585	1,433,286
Fuel oil	162,600	23,229	216,613	30,945	2,248,078	1,853,470
Diesel and gas oil	53,605	7,658	160,989	22,998	1,289,330	527,785
Gasoline	196,703	28,100	321,619	45,946	1,114,571	1,067,561
Kerosene	.....	.....	18,322	2,617	588,107	77,452
Other unfinished oil	.....	.....	156,531	22,362	156,531	3,420
Coastwise-domestic:						
Crude oil	35,609	5,087	112,753	16,108	1,078,013	952,850
Fuel oil	343,083	49,012	206,978	29,560	2,403,909	1,684,287
Diesel and gas oil	109,958	15,708	141,606	20,229	503,444	356,846
Gasoline	200,070	28,581	197,585	28,226	1,988,280	2,142,327
Kerosene	.....	.....	11,479	1,640	25,314	59,878

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	75,8 5	.....
Gasoline	.....	.....	25,778	3,683	25,778	.....
Lubricants	.....	.....	.....	.....	.....	1,779
Foreign exports:						
Crude oil	.....	.....	267,808	38,258	656,297	473,786
Fuel oil	66,769	9,538	.....	.....	254,876	523,649
Diesel and gas oil	81,242	11,606	54,757	7,822	458,232	100,856
Gasoline	97,601	13,943	159,994	22,856	1,023,158	717,192
Kerosene	.....	.....	21,323	3,046	137,295	163,009
Lubricants	.....	.....	18,097	2,585	124,377	43,008
Coastwise-domestic:						
Fuel oil	155,552	22,222	115,481	16,497	1,176,787	1,211,136
Diesel and gas oil	.....	.....	49,899	7,128	108,023	76,898
Gasoline	45,506	6,929	114,337	16,334	806,527	770,485
Kerosene	.....	.....	18,142	2,592	21,509	24,588

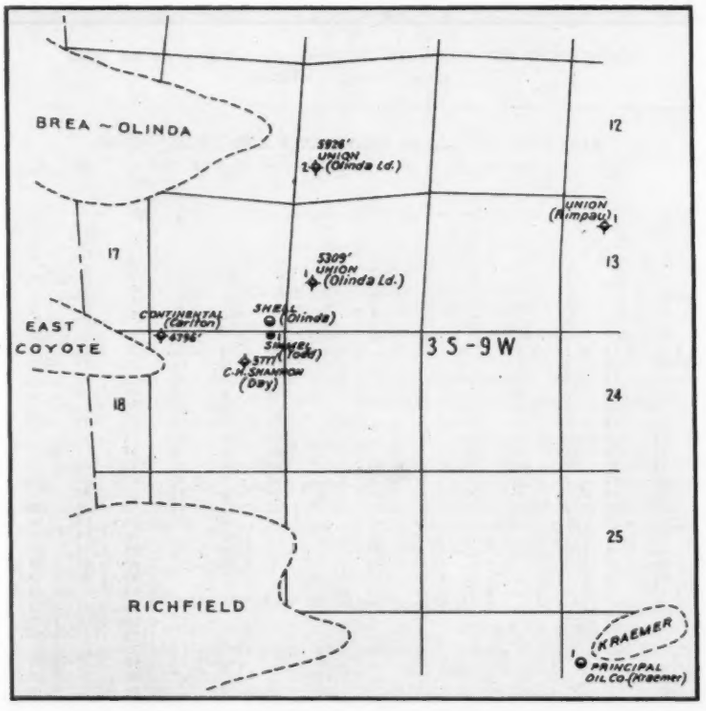
Potential Producers

Four new wells are expected in the El Segundo field within a fortnight, and should be followed into production by two or three additional potential producers. Republic Petroleum, discoverer of the El Segundo field, has been swabbing No. 3 El Segundo for 36 hours and may be obliged to undertake a clean-up job. Nos. 4 and 5 on the El Segundo lease of Republic Petroleum are scheduled to begin coring within a few days, and No. 6 is expected to be spudded in within two weeks. Caminol Co., Ltd., should have both of its drilling projects ready for a production test within another week as 7-inch water strings have been landed in Nos. 1 and 2. Completion of these wells has been timed to almost coincide with completion of the company's natural gasoline plant, on the company's lease. In addition to handling natural gas from its two new wells, the company expects to process gas from wells of Republic Petroleum, Royalty Service Corp. and Ohio Oil Co. if the wells these companies are drilling prove successful. Richfield Oil Co., with two excellent producers to its credit in the El Segundo field, has landed a 7-inch water string in No. 4 and has started rig construction for No. 1 Santa Fe, on a right of way of the Santa Fe Railroad made possible by moving the railroad's El Segundo station southward. The Texas Co. cored 23 feet of oil sand in No. 2-1 Johnson, the most easterly well in the El Segundo field, and expects to complete a commercial producer. The Texas Co. No. 2-1 Johnson and Union Oil Co. No. 1 El Segundo, although substantially deeper than wells producing in the field, have cored a normal oil sand, which has been found lacking in the area to the northwest. The former has also cored some oil sand in No. 1 Security in the extreme western end of the field, but the top of the horizon is not definitely known.

Wilmington

Operators in the Wilmington field in the area adjacent to the Ford Motor Co.'s assembly plant, have found it advisable to drive a number of piles to provide a base for rig foundations, and in a few spots to build roads of decomposed granite. General Petroleum Corp. has adopted the policy of completely enclosing all rigs from top to bottom. The Wilmington field, although at present limited to Los Angeles County, undoubtedly extends across the county line into Orange County, and operators may be obliged to conform with different sets of laws in the same field. The potentially productive acreage in Orange County is at present partially restricted and the city council of Long Beach is considering the advisability of submitting a petition to lift drilling restrictions to a vote of the people at a special election. There is no unanimity of opinion as to how many wells should be allowed to each five acres and consequently it may be several weeks before a final decision is reached. Conservative operators are of the opinion that not more than one well should be drilled to each five acres and a number of operators have already sounded out landowners with a view of consolidating holdings.

Union Pacific Railroad, holding a considerable block of acreage in the Wilmington district, has started an aggressive drilling campaign and plans call for the drilling of 10 additional wells. The company has just picked up the top of the first oil zone in its No. 1 at 2,412 feet and a protective string of pipe will be cemented within the next few days. Practically all operators in the Wilmington field are passing up the first zone and are producing from the second horizon, which has been found more prolific. These wells rarely require more than a month from spud to completion at approximately 3,500 feet. The Union Pacific Railroad Co. has spudded in its second well in the Wilmington district and is rigging up Nos. 3, 4 and 5. Piles have already been driven for Nos. 6, 7 and 8 and rig construction is expected to get under way within the next few days. Most of these wells are located along the west side of Ford Avenue and close to the street.



Shell Oil Co. is starting a wildcat in section 16-3-9, east of the East Coyote field and north of the Richfield district of Los Angeles Basin

Wilmington Completions

General Petroleum Corp., Bankline Oil Co., George F. Getty, Inc., Pacific Western Oil Co. and Royalty Service Corp. are all consistently expanding the scope of work in the Wilmington field. Pacific Western Oil Co. completed its initial well in this district a few days ago and should have another, No. 1 Murphy, ready for a test this week. Pacific Western's new completion was No. 1 Patten, which was brought in flowing 486 bbls. of clean 19.8 gravity oil per day from 3,543 feet. The hole was finished with an 8⅝-inch combination string carrying perforations at 3,308-46 feet and 3,500-43 feet, and which was cemented through perforations at 2,997 feet. No. 1 Murphy has

also been finished with an 8⅝-inch combination string. Bankline Oil Co. completed No. 7-1 Watson, pumping 220 bbls. of 18.3 gravity oil daily from 3,517 feet after the hole had been finished with an 8⅝-inch water string landed at 3,217 feet and a 6⅝-inch liner including 300 feet of perforated. Sovereign Oil Corp. No. 3 Advance Truck was completed pumping 205 bbls. of 17.4 gravity oil per day after the hole had been plugged back from 4,271 feet to 3,625 feet and finished with an 8⅝-inch liner, carrying 315 feet of perforated. The output is cutting approximately 10 per cent, but this may clean up. Selegna Associates, Inc., are expected to complete No. 1 Silveria this week, as it is bottomed at 3,588 feet and an 8⅝-inch combination string landed on bottom and cemented through perforations at 3,200 feet. This gives the well 388 feet of oil zone from which to produce. The Wilmington Oil Development Co. No. 1 Community, finished last week doing 318 bbls. per day, is now flowing 664 bbls. of clean 19.5 gravity oil per day. General Petroleum Corp., discoverer of the Wilmington field, is expected to complete three new wells within the next fortnight and all of them should register substantial production. This trio will be followed into production within a short time by No. 1 Ford, the first of five wells located on acreage held by the Ford Motor Co. These potential producers are all located in the drawbridge area, where General Petroleum completed its first well. The Wilmington field has not yet reached its drilling peak, as the high mark for development work appears to be several months away. Potential production of the Wilmington field is within striking distance of 10,000 bbls. per day and this may exceed 15,000 bbls. daily before the close of March.

Deep Drilling

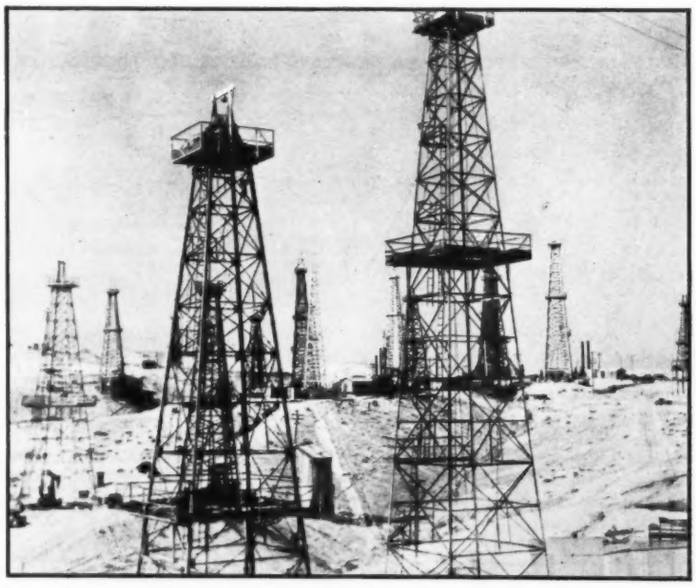
Union Oil Co. has just passed the 10,100-foot level in No. 100 Bell, a deep test which the company is drilling in the Santa Fe Springs field. This is the deepest hole drilled in Los Angeles Basin and is the first well to exceed a depth of 10,000 feet in the southern part of the state. Over in the Dominguez field of Los Angeles Basin Union Oil Co. No. 50 Callender has reached a depth of 9,610 feet and is still rotating ahead. Neither of these deep tests has cored a new deep zone as far as can be determined. Due to the depth of Union's test well in the Santa Fe Springs field operators holding town lot acreage would find it very difficult to keep a hole straight enough to keep it within the confines of the lease. For this reason it is quite likely that several town lots will be combined into one lease if deep drilling should become necessary. In the Richfield district Union Oil Co. has temporarily suspended drilling operations on No. 29 Chapman at 8,610 feet and it is not known just how soon work will be resumed on this deep test which has failed to show anything out of the ordinary to date.

Rosecrans-Newhall

Barnsdall Oil Co., in the Newhall district of Los Angeles Basin, is coring more oil sand than some thought existed in the entire area. Barnsdall's No. 1 San Francisco late in the week was still coring ahead in oil sand at 6,441 feet. Up to date Barnsdall has cored 281 feet of possibly productive zone, a large part of which is a fairly good oil sand. This well failed to result in commercial production on a test made two weeks or so ago and the company decided to core ahead. The bit is in rocks of Miocene age. Shell Oil Co. has taken some three-year leases in the Newhall area, including the 620-acre Sepulveda ranch in section 17-4-17, and 80-acre Henderson property in section 10-4-17. In the Rosecrans field Barnsdall Oil Co. will test No. 10 O'Dea, bottomed at 7,664 feet, with a 6⅝-inch water string landed at 7,240 feet. The well has about 300 feet of good-looking oil sand.

Midway-Sunset

In the Midway-Sunset field Gibson Oil Co. completed No. 1 O'Brian pumping 202 bbls. of 23.4 gravity oil, cutting 10 per cent, from 3,065 feet. Otis Hoyt No. 5 Maricopa in section 7-11-23 was brought in on a compressor flowing 146 bbls. of 15.4 gravity oil per day from 2,027 feet, after the hole had been finished with a 6⅝-inch liner carrying 324 feet of perforated. Hancock Oil Co. No. 5 M.S. in section 8-11-23 was brought in under a natural flow doing 180 bbls. of relatively clean 23.3 gravity oil daily from 3,057 feet. Pattiway Oil Co.'s shallow completion in section 12-11-24, which was bottomed at 1,729 feet, has been completed pumping 81 bbls. of 14.6 gravity oil per day. Three other potential producers are nearing completion in this field and unless something unforeseen develops they should be tanking oil within another few days.



NOT SNOW BUT SUNSHINE—Williams area, Midway-Sunset field, Kern County, California

San Joaquin Wildcats

Wilshire Oil Co. staked location for No. 1 F. & P. in the Union Avenue district of Kern County and is expected to spud within 10 days. The test is in section 36-30-27, about 5 miles south of Bakersfield, where approximately 450 acres have been leased.

Over in the Tejon district of Kern County, Reserve Oil & Gas Co. has started injecting gas from No. 33-3 into No. 33-2 in an effort to develop a sustained flow. No. 33-3 has shown more gas than oil while No. 33-2 has shown more oil than gas.

Kern River

In the Premier section of the Kern River field, Roscoe & Stanley No. 3 Newhope proved to be an exceptional good well upon completion at 2,684 feet as it came in under a natural flow doing 367 bbls. of 14.5 gravity oil. It is rather unusual for a well in this section of the field to come in flowing and No. 3 Newhope is therefore a welcome surprise. The Golden Bear Oil Co. will offset it on the south with No. 6 Grimes, in section 32-32-27. Honolulu Oil Corp. No. 68 in the Premier district of Kern River in section 8-28-27 has been completed, pumping 114 bbls. of 15.1 gravity oil per day from 2,798 feet after the hole had been plugged back from 2,857 feet because of bottom water.

In the Mount Poso field, Frank Goldman has completed No. 2 Glide in section 35-27-28 and this new well was brought in pumping 410 bbls. of

(Continued on Page 104)

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Ventura*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	....	$.70	.74	.74	$.71	$.70	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.92	.77	.80	....	.70	.78	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.92	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.78	....	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	....	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	1.15	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

West and North Texas

By L. E. BREDBERG

TWO TESTS IN TERRELL AND TERRY COUNTIES PROVE DRY

FORT WORTH, Tex., Mar. 15.—The extreme northern end of the Permian Basin reported one failure in the past week in extreme wildcat territory, and at the same time an Ordovician test on the extreme opposite end of the West Texas district also recorded a failure. The former test was an old well abandoned in 1931 as a small gasser on the M. H. Goode ranch, in section 26, Block 161, G.C.&S.F. Survey, in the northeast corner of Terrell County. It was given up at 6,120 feet, but the Ohio Oil Co., successor to the Transcontinental Oil Co., which started and first completed it, started drilling in September, 1936, and carried it to 9,140 feet, present total depth, where it was abandoned this week in black shale and sand. The company was seeking production from the Ordovician. The gas came from the Pennsylvanian.

The extreme northern wildcat was abandoned by W. L. Pickens and others in the southeastern part of Terry County, after it struck sulfur water in the lime at 4,938 feet to total depth of 4,975 feet, where it is to be plugged, although contract depth was 5,500 feet. It is in section 1, Block C-37, P.S.L. Survey, on the J. B. Lewright lands. Regardless of this failure, other parties have assembled a block about 10 miles to the northeast, in the same county, and have made tentative location in section 28, Block 1-A, E.L. Survey. M. R. Hemphill assembled a block containing 23 sections around this location and associates are now busy helping in selling spreads to finance a proposed 5,500-foot test. This location is about 2½ miles south of a dry hole abandoned in section 7, in 1929. Total depth of that test was 5,080 feet.

With two fields opened in the northern counties of Yoakum and Cochran within the past year and a half, attention of operators has been diverted from other areas to that sector of West Texas. This column carried the news last week that three more tests are to be drilled at once in those two counties, with blocks and leases taken in Yoakum. Cochran and adjacent counties with the idea of sinking still other wildcats in the sector, making it the latest and most important wildcat territory in the district.

Andrews Strike

Shell Petroleum Corp. No. 1 E. F. King, SE cor. section 10, Block A-42, P.S.L. Survey, 6½ miles southwest of Andrews, and 1 mile west of a small well in section 6, Block A-43, and about midway between the Fuhrman field on the south and the Kuykendall pool on the northwest, is rigging up pumping equipment at a total depth of 4,486 feet, after having swabbed 100 bbls. through tubing in 24 hours. It is showing for a commercial producer and a discovery well without having been acidized or shot. It will probably be deepened and then given a shot of nitroglycerin or acidized, in an effort to increase its production. The well to the east was completed three years ago making around 50 bbls. per day after a shot at plugged-back depth of 4,539 feet, and the two wells may prove connecting links between the Fuhrman and Kuykendall pools when intervening acreage is tested.

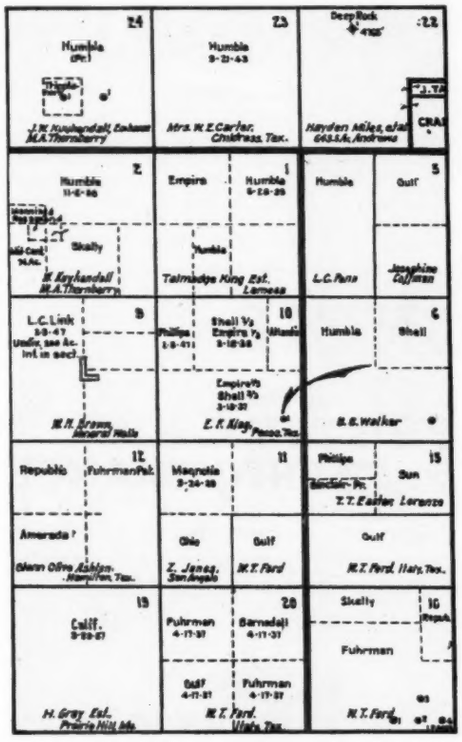
Two miles south of the above well in Andrews County, the Standard Oil Co. of Texas has staked location and is moving in materials for a test in the NE quarter of section 21, Block A-42, about three-quarters of a mile west of production in the Fuhrman field.

Coke County Wildcat

The Plymouth Oil Co. has staked location for a 4,000-foot test on its large block near Blackwell in Coke County, which will be interesting because of the fact that two tests previously drilled by the Mid-Kansas Oil & Gas Co. (now Ohio Oil Co.) logged good oil showings. It is on the Mrs. Mary Hanna lands in the SW SE section 252, Block 1-A, H.&T.C. Survey, 1½ miles southwest of the town of Blackwell, and but a short distance east of the former two tests.

Ector Extension

The southern end of the Cowden field in Ector County was given another mile extension to the west when the Alma Oil Co. No. 1-B Wight, in the SE cor. section 9, Block 43, Township 1s, T.&P. Survey, flowed 189 bbls. in 24 hours through open casing after a shot of 150 quarts of nitroglycerin. Total depth is 4,216 feet.



Shell Petroleum Corp. No. 1 E. F. King, which is appearing as an extension well, and a possible link between the Fuhrman and Kuykendall areas in Andrews County. —(Southwest Mapping Co., Fort Worth)

In the western part of this county, wells drilling on acreage between production in the Cummins-Scharbauer and Goldsmith areas, are being completed nearly every week, resulting in the extension of production so that these three previously separated areas are being combined into one large field.

Other Wildcat Locations

Other wildcat locations newly staked in the West Texas district are in Howard, Jones, Reagan, Taylor, Upton and Scurry counties. Several of these have been mentioned in former reviews. A test is to be made on the W. E. Friend ranch in the W. Allen Survey, south of the town of Big Lake in Reagan County. This location falls in the SW cor. of section 3, in an area in which a small well was completed over two years ago. The discovery was of such little consequence that so far only one other test has been drilled nearby, it proving a failure.

E. L. Goos has made a location for a wildcat test in section 148, Block 97, H.&T.C. Survey, Scurry County. This is several miles northwest of the Ira or Northwest field, one of the smallest in the district.

Three more locations were announced for Jones County, all in the eastern side. Hufstuttler and others are drilling No. 1 J. L. Favor in Subdivision 4, A. Thompson Survey, one-half mile east of Lanius. Lueders Development Co. is drilling on No. 1 S. L. Underwood, in section 16, S. L. Underwood Survey, 2 miles south of Lueders. Peckham and others have location on lands of the Denton National Bank in section 17, Block 3, H.&T.C. Survey, in the northeastern part of the county.

McCamey Extension

The outpost of T. B. Knox and others on the Johns and Burleson lands, in section 12, Block R, T.C. Ry. Survey, extends the old McCamey field about a mile farther south in Upton County, thereby proving more acreage to production in a field which several years ago was considered defined. It was completed for 210 bbls. per day on the pump, producing from lime logged at 2,219-2,352 feet. This well, like all other new completions in the area, was acidized. Nine tests, all producers except one, were completed in the field this week.

Keystone Extension

The Keystone field in eastern Winkler County is promised a three-quarter of a mile northwestern extension. J. R. Sharp's No. 1 Empire-Walton, in the SE cor. of section 19, Block 77, P.S.L. Survey, headed 15 bbls. per day when drilling below 3,370 feet. The oil is coming from saturated lime logged at 3,305-35 feet. It will probably be shot or acidized, making a good well and proving up nearly 640 acres more.

CENTRAL AND NORTH CENTRAL TEXAS

The town of Eastland is to have another test drilled in its backyard. Barnett Petroleum Corp. of Dallas plans to drill a 2,500-foot hole just 1 mile southeast of the town, in Eastland County, and 660 feet north of an abandoned gasser. Location is on the A. L. C. Downtain farm, in section 2, E.T.R.R. Survey, Block 6.

Earnest Lloyd and others are preparing to drill a wildcat 3 miles northeast of the town of Graford, in Palo Linto County, location falling on the Bailey lands in section 2,003, T.E.&L. Survey.

Chester A. Farris of Arlington has assembled a block of 12,000 acres, centering in the J. Walker Survey, Abstract 1,646, in the northern part of Parker County, with intention to drill. Claude F. Dally, consulting geologist of Fort Worth, worked the subsurface geology on the block, which lies directly south of another 12,000-acre block recently assembled in the county. Production will be sought in the Strawn series, in the same horizon found to the north in the Bryson field, in Jack County.

Since two wells have been completed in the town of Bryson, in Jack County, prices on town lots have jumped 1,000 per cent and no lots are to be found to lease now. Paying such high prices as $1,000 in cash and $1,000 in oil, and drilling a $12,000 well on the lot, may net some operators little profit, especially if an active town-lot drilling campaign is waged within the next few weeks. The gas pressure is rapidly diminishing in the field

as a result of close spacing and development and the wells are all expected to go on the pump in the near future.

Graham Discovery

The area 2½ miles southeast of the town of Graham in Young County, appears to contain an oil as well as gas and distillate pool. Rathke Oil Co. No. 2 Johnson, in the H. F. Young Survey, sprayed oil from the Marble Falls lime topped at 4,229 feet. Only 2 feet of formation was drilled when the well was shut in. It is 1 mile west of the recently completed 40,000,000-foot gasser of the Eppenauer Drilling Co. on the Eddleman Brothers lands in section 1, T.&N.O. Survey. That well made 250 bbls. of distillate per day, with the gas, and a pool of considerable size may be proven in the area.

Grayson Wildcat

About 7 miles north of the western Grayson County discovery of Rapp and others on the Singletary lands, Quillen Survey, and just north of the town of Whitesboro, Denver Producing & Refining Co. is to drill a 4,000-foot test on a block of some 6,000 acres. It is about 5 miles east of the lone producer of the Big Indian Oil & Development Co. on the B. W. Davis lands, eastern Cooke County, and will seek the pay sand topped in that well at 3,520 feet.

Rapp and others No. 1 Singletary, 2½ miles southeast of Collinsville, is rated a small pumper at plugged back depth of 3,855 feet. Pumping gauge has not been taken. If it proves a commercial producer, which is expected, several nearby tests are expected to be started at once. It is in the southwestern part of Grayson County, and has caused a large amount of leasing since it first encountered oil over a month ago.

Cooke Contracts

In southwest Cooke County, near the old Gulf Oil Corp. No. 1 J. T. Donald in the S.P.R.R. Survey, Abstract 970, the Marine Oil Co. of California has contracted to drill three tests on its block of 1,000 acres, south of the Donald well, which is bottomed at 2,985 feet.

Sale

Hanlon-Buchanan, Inc. of Tulsa, has been reported to have bought a 224-acre lease in the Hammon and Meredith pool southeast of the Bryson field in Jack County, for a consideration of slightly over $51,000. Bowden and Rankin of Weatherford made the sale, which includes two tracts of the Kee lands. The purchasers already have production in this pool, and extended the eastern part of the field this week with No. 1 McIntyre, which is yet incomplete, but appearing as a good well.

Panhandle

About 1¼ miles northwest of the nearest production in the Stinnett area in west central Hutchinson County, the Stansilvania Oil & Gas Co. No. 1 C. B. Lasater, in section 27, Block M-23, T.D.R.R. Survey, is showing as a producer and consequently an extension well to the Dolomite area. It logged first saturation at 3,175-3,185 feet and showed an increase at 3,190 feet. Elevation is 3,305 feet.

CENTRAL TEXAS COMPLETIONS

Coleman County

Anzac Oil Corp. and others No. 1-H Morris, J. Harris Survey No. 77, gas sand 2,217-21 feet, 1,500,000 feet gas.

Eastland County

Thompson & Price No. 1 Fox, Lot 49, CSL McLennan Survey, gas sand 1,984-92 feet, 3,250,000 feet.

Jones County

Danciger Oil & Refining Co. No. 2 Guitar, section 44, T.&P. Survey, Block 15, sandy lime 1,976-2,005 feet, treated with 2,000 gallons acid, 482 bbls. oil, estimated 3,000,000 feet gas. R. B. Farris and others No. 4 Guitar, section 44, T.&P. Survey, Block 15, lime 1,992-2,003 feet, treated with 2,000 gallons acid, 318 bbls. of oil. Oyster & Griffith No. 1 Bumpass, B. Jones Survey, total depth 2,635 feet, dry and abandoned. Sandy Ridge Oil Co. No. 7 Jones, section 5, T.&P. Survey, Block 15, 1,930-44 feet, 45 bbls. Ungren & Frazier No. 12-C Dorsey, Block 4, M. Bueno Survey No. 197, sand 2,137-48 feet, 507 bbls.

"Bill" McCurdy, independent oil producer, Fort Worth, Tex.

Shackelford County

Green, Jones & Stasney No. 1 Davis, total depth 1,716 feet, dry and abandoned. N. H. Martin & Son No. 3 Davis, 95 bbls. Roeser & Pendleton No. 19 Dawson & Sonway, 1,598-1,614 feet, 200 bbls. Sandefer & Thompson No. 4-A Alexander, section 2, T.&P. Survey, Block 14, 1,631-42 feet, 40 bbls.

WEST TEXAS COMPLETIONS

Andrews County

Humble Oil & Refining Co. No. 16 J. S. Means, 4,280-4,530 feet, 1,249 bbls.

Crane County

E. P. Cravens No. 3 Hughes-Gibbs, 2,235-63 feet, 644 bbls. on pump, acidized. John Hertz No. 1-A Hughes, dry and abandoned 2,078 feet; No. 1-B Hughes, dry and abandoned 2,129 feet. Texas-Consolidated Oil Co. No. 5 Hughes, 2,025-93 feet, 798 bbls. on pump, acidized.

Ector County

Alma Oil Co. No. 1-C Wight, 4,168-4,216 feet, 189 bbls. after shot. Atlantic Refining Co. No. 1-C Rumsey, 4,217-50 feet, shot, 517 bbls. Broderick & Calbert No. 2 Foster, 4,090-4,202 feet, shot, 523 bbls. Empire Oil & Refining Co. No. 1 B. H. Blakeney, 4,196-4,240 feet, shot, 326 bbls.; No. 2-B Cummins, 4,093-4,300 feet, acidized, 298 bbls. Humble Oil & Refining Co. No. 2 Cowden, 4,170-4290 feet, plugged back to 4,275 feet, acidized, 1,680 bbls.

Glasscock County

Shell Petroleum Corp. No. 1 McDowell, dry and abandoned 3,282 feet, elevation 2,544 feet.

Howard County

Ambassador Oil Co. No. 8 Read, 2,655-2,768 feet, shot, 230 bbls. on pump.

Jones County

R. B. Farris and others No. 4 Guitar, Trust, 1,989-2,193 feet, plugged back to 2,003 feet, acidized, 318 bbls. Oyster and Griffiths No. 1 Bumpass, 2,635 feet, dry and abandoned. Ungren and Frazier No. 12-C Dorsey, 2,139-53 feet, 507 bbls.

Loving County

Mason Oil Co. No. 2 Kyle, 3,895-3,910.5 feet, top Delaware lime 3,839 feet, top sand 3,895 feet, shot, 300 bbls. per day flowing through casing, elevation 3,053 feet.

Nolan County

Robinson Drilling Co. No. 1 Ed Gabler, dry and abandoned 3,669 feet, elevation 2,419 feet.

Upton County

Choate and Hogan No. 1 Baker, 2,238-2,272 feet, acidized, 781 bbls. on pump in 22 hours. Cordova-Union Oil Co. No. 2 fee, 2,118-98 feet, shot, 152

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bbls. on pump. J. W. Ellis No. 8-B Robbins, 2,180-2,208 feet, acidized, 974 bbls. on pump. Eppenauer Drilling Co. No. 1-B Lane 2,064-2,117 feet, acidized, 315 bbls. on pump. Humble Oil & Refining Co. No. 19 Ricker, 2,104-15 feet, acidized, 284 bbls. on pump. D. L. Hunter No. 4 Robbins, 2,184-94 feet, acidized, 1,054 bbls. on pump. T. B. Knox and others No. 1 Burleson, 2,219-2,352 feet, acidized, 210 bbls. on pump. West Texas Production Co. No. 4 Chaney, 2,416 feet, dry and abandoned. Williams and Williams No. 3 Robbins, 2,186-2,208 feet, 432 bbls. on pump.

Pecos County

Lee Petroleum Co. and others No. 1 Nutt, dry and abandoned 2,224 feet, elevation 2,752 feet.

Terrell County

Ohio Oil Co. No. 1 Goode, elevation 2,405 feet, dry and abandoned 9,140 feet. At 6,120 feet it made 6,000,000 feet gas daily, base Permian lime 3,350 feet.

Ward County

Atlantic Refining Co. No. 26 Johnson, 2,470-2,905 feet, plugged back to 2,534 feet, shot, 133 bbls. Gulf Oil Co. No. 12 Estes, 2,312-90 feet, shot, 14,612,000 feet gas; No. 79 O'Brien, 2,620-2,773 feet, shot, 577 bbls. Pat Hill No. 10 Clements, 2,233-2,315 feet, shot, 319 bbls. Humble Oil & Refining Co. No. 12 Richter, 2,455-2,600 feet, shot, 1,060 bbls.; No. 9-F University, 2,448-3,120 feet, plugged back to 2,767 feet, shot, 368 bbls. Pat Moran and others No. 2 Robison, dry and abandoned. Provine and O'Brien No. 1 Hadwin, 2,145-2,202 feet, shot, 6 bbls. Richardson Oil Co. No. 22 Hathaway, 2,480-2,650 feet, shot, 4,213 bbls. Rio Bravo Oil Co. No. 16 Olcott, 2,270-2,486 feet, shot, 1,341 bbls. Standard of Texas No. 3-37 McFarland, 2,456-2,650 feet, shot, 3,339 bbls. Tide Water Associated No. 9 Johnson, 2,463-2,676 feet, shot, 5,443 bbls.

Winkler County

Harry Adams and others No. 7-A Walton, 2,840-3,100 feet, shot, 1,273 bbls. Adams and Bradley No. 1 W. P. Edwards, 2,967-98 feet, acidized, 735 bbls. Algord Oil Co. No. 1 E. W. Cowden, 2,818-3,148 feet, plugged back to 3,065 feet, shot, 3,500,000 feet gas. Magnolia Petroleum Co. No. 8 Colby, 2,924-3,138 feet, shot, 405 bbls.; No. 62 Walton, 2,840-2,996 feet, 902 bbls.; No. 63 Walton, 2,842-2,955 bbls., shot, 876 bbls. Mid-Continent Petroleum Corp. No. 16 Walton, 2,800-2,970 feet, shot, 1,029 bbls. Read and Duffey No. 1 Sealy, dry and abandoned 4,520 feet. Shell Petroleum Corp. No. 6-L Hendricks, 2,817-3,112 feet, shot, 1,397 bbls. Sinclair Prairie Oil Co. No. 13-B Walton, 2,875-3,100 feet, plugged back to 2,986 feet, shot, 1,044 bbls.; No. 14-C Walton, 2,880-2,985 feet, shot, 1,365 bbls.

NORTH TEXAS COMPLETIONS

Archer County

Alexander and others No. 1 Andrews, 903-40 feet, 15 bbls. Brown & Kriss No. 5 Campbell, 1,236-38 feet, 15 bbls. L. T. Burns No. 2 Benson, 980 feet, dry; No. 5 Carpenter A, 1,817 feet, dry. Daniels & King No. 1 Turbeville, 1,551 feet, dry. Golding & Cochran No. 2 Hamilton, 1,155-60 feet, 50 bbls.; No. 7 Jeske, 1,177-87 feet, 150 bbls.; No. 9 Kunkel, 1,250 feet, dry; No. 1 Wilson, 1,500 feet, dry. Hammond Oil Co. No. 1 Powell, 2,703 feet, dry. E. E. James No. 2 Andrews, 1,010 feet, dry. J. T. Miller No. 1 Herron, 1,179 feet, dry; No. 1 Oil Investment Co., 1,210 feet, dry. A. P. Nicholson No. 2 Williams, 601 feet, dry. Peery and others No. 3 Duckworth, 1,392-1,400 feet, 20 bbls. Petroleum Producers Co. No. 1 Griffith A, 1,319 feet, dry. Story Jack No. 1 McMurty, 721-57 feet, 25 bbls. White Stella No. 1 fee, 1,605 feet, dry.

Clay County

Bridwell Oil Co. No. 4 Joe Stephenson, 315 feet, dry.

Cooke County

F. W. Merrick, Inc. No. 34 A. Knabe, 817-42 feet, 10 bbls. United Production Co. No. 1 Jones, 1,810 feet, dry.

Foard County

Texas Co. No. 11 Johnson, 3,556-3,663 feet, 1,580 bbls.

Jack County

Edwards and others No. 1 Simpson, 2,962-3,000 feet, 350 bbls. Hamilton Petroleum Co. No. 1 J. S. Rhodes, 2,362-70 feet, 405 bbls. Mrs. D. P. Jack No. 1 Mrs. M. Hardy, abandoned location; No. 1 J. L. Mask, 100 feet, dry. D. D. Neff, Trustee No. 1 H. C. Moore A, abandoned location. Peery and others No. 1 Raley B, 2,930-65 feet, 850 bbls.

Montague County

W. E. Halbert No. 1 W. S. Petty, 3,406 feet, dry.

Wichita County

Dinsmore & Stripe No. 1 Guyer, 159 feet, dry. W. H. Barton, Jr. No. 1 Honaker, 1,120 feet, dry. L. T. Burns No. 16 Waggoner, 1,317 feet, dry; No. 17 Waggoner, 1,753-57 feet, 25 bbls.; No. 18 Waggoner, 613 feet, dry. Deep Oil Development Co. No. 8 Munger A, 3,685-3,865 feet, 2,000 bbls. Douglas Production Co. No. 28 Douglas A, 295-300 feet, 5 bbls.; No. 29 Douglas A, 396 feet, dry. King Oil Co. No. 4 Waggoner I, 1,028-50 feet, 10 bbls. Pace Petroleum Co. No. 6 Edgerley A, 2,006 feet, dry. Perkins & Cullum No. 23 T. L. Burnett, 1,348-60 feet, 25 bbls. Texas Co. No. 432 W. T. Waggoner A, 1,948-78 feet, 105 bbls.

Wilbarger County

Barkley & Meadows No. 21 Waggoner C, 1,104-16½ feet, 35 bbls. Bason Drilling Co. and others No. 1 Waggoner, 2,444 feet, dry. Lido Oil Co. No. 17 Waggoner C, 2,098-2,105 feet, 50 bbls. Waggoner Refining Co. No. 7 Waggoner CC, 1,097-1,104 feet, 10 bbls.

Young County

Bohner and others No. 1 Prideaux A, 576-83 feet, 10 bbls. W. F. Collins No. 1 Ward, 633 feet, dry. Helmerich & Payne No. 1 Graham, 3,620-56 feet, 5 bbls.; No. 1 Rubenkoenig, 4,228 feet, dry. Hinson & Tidwell No. 2 Thompson, 3,758-3,903 feet, 1,000 bbls. B. B. Mercer, Trustee No. 3 N. L. Hardy, 671 feet, dry. Nash & Windfohr No. 3 Manley, 3,290-3,314 feet, 200 bbls. Texas Co. No. 8 Gambrell, 1,351 feet, dry.

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SUPERIOR DROP-FORGED TOOLS

East and East Central Texas

By
L. E. BREDBERG

DEEP TEST IN TALCO IS DRY; 13 NEW LOCATIONS STAKED

DALLAS, Tex., Mar. 15.—Thirteen locations were made in the Talco field in northwestern Titus and northeastern Franklin counties in the past week, nine more than reported in the previous week. At the same time 11 wells were completed. Four locations were staked for the Sulphur Bluff field in Hopkins County, 18 miles to the southwest, and one well was completed in that field.

The J. Z. Werby and others No. 1 Williams, in the M.E.P.R.R. Survey, 2 miles east of production in the Talco field, Titus County, will probably be plugged after logging salt water with no oil or gas showing in the Lower Glen Rose section of the Trinity. It is bottomed at 5,974 feet, with contract depth 6,200 feet. A Schlumberger test may be made to make sure whether or not it is a failure. Elevation is 341 feet. The base of massive anhydrite was logged at 5,676 feet.

This test was drilled by Stroube & Stroube last July, to a total depth of 4,510 feet, failing to make a Paluxy sand producer. The discouraging showing made so far in the Glen Rose in the test does not condemn all other producing leases from a deeper producing standpoint, but it clouds the probability of Glen Rose production being found in the field, and it will no doubt be some time before another such deep test is sunk in the field.

A rank wildcat in Titus County, located 8 miles southwest of Mount Pleasant, and drilled by George H. McIntyre and others on the J. B. Stevens, Jr., lands, in the J. Muechen Survey, was abandoned at a total depth of 5,074 feet, elevation 348 feet. It was in search of production in the Paluxy, upper member of the Trinity.

Movements From Talco Field

During the week the Humble Pipe Line Co. moved an average of 11,700 bbls. per day through its line from the Talco field to its Longview station in the East Texas field.

The Talco Pipe Line Co. has ordered 8-inch pipe to loop its line from the Talco field to Mount Pleasant, and the Shell Petroleum Corp. has contracted to take 60 cars of Talco crude at the rate of two cars per day for 30 days from the American Liberty Oil Co. at 5 cents per barrel above the American Liberty's posted price.

Looping the 15-mile 5½-inch line of the Talco Pipe Line Co. and the Shell contract will help the crowded crude condition in the field, but much oil is going into steel tanks and earthern storage in the field. Open storage of this crude, especially that which is untreated, cannot do much damage, if any, to the crude, because of its low gravity, consequently the Railroad Commission has taken no action against such storage.

Deep Abandonment

Superior Oil Co. No. 1 P. D. Paul, in the Mary Latham Survey, 4½ miles northeast of Quinlan in Hunt County, has been given up as a failure at 6,501 feet. Elevation is 489 feet and base of the massive anhydrite was logged at 5,450 feet. It showed neither oil nor gas in the Paluxy, upper member of the Trinity, or in the Glen Rose, lower member, which was penetrated to a depth of over 1,000 feet. It was located on one of the best looking structures along the Mexia-Talco fault line, and has been one of the most closely watched deep wildcats drilling in the district.

During the latter part of last year much leasing was carried on around Hatcherville, southwest of Sulphur Bluff in Hopkins County, and reports are to the effect that a test may be started in that area within the near future, to be drilled in quest of production from the Paluxy. This area is along the fault, not far distant from the Sulphur Bluff field.

Northern Bowie County is to receive a 6,000-foot test on a block of some 7,500 acres on which Thompson & Jaffe have staked location for No. 1 J. A. Rosamon in the Jefferson Milam Survey, just south of Red River, according to reports coming from that sector of the district. Another block of 8,000 acres is being assembled in the northeastern part of Red River County, just east of the town of English, and extending eastward to the Bowie County line.

Pipe Line Construction

The Sulphur Bluff field, which has a 6-inch pipe line outlet via the Talco field in Franklin and Titus counties, owned by the American Liberty Pipe Line Co., will soon have another 8-inch outlet. The Big State Oil Corp. of Houston, is building this line, which will be around 10 miles in length and will connect the field with a loading rack on the Cotton Belt Railroad to the south. This company has been moving crude through the American Liberty line and has an interest in a 450-acre lease, with four producing wells, with Walter Goldston. It will purchase crude from other leases in the field as soon as its line is completed.

East Texas Field Sale

The American Liberty Pipe Line Co., associate of the American Liberty Oil Co., is connecting to 41 wells in the East Texas field since the reported sale of the Invincible Oil Co.'s six leases on the Frank Elder, John Elder, Minnie Elder, fee, Weiss (A) and Williams tracts, to the American Liberty Oil Co. The leases cover 96.2 acres.

Only 26 locations were staked in the East Texas field last week, about the average for the past few weeks, and which is expected to hold for some time. Twenty-seven tests were completed two of which proved dry.

Proposed Construction

The Utilities Natural Gas Co., a subsidiary of the American Liberty Oil Co., has proposed the construction of a 10-mile gas line from the Long Lake field in the southwestern part of Anderson County to Palestine to furnish gas to that city which has tentatively granted a 25-year franchise to the company to furnish the city gas from several wells in the Long Lake field. The United Gas System now supplies the city with gas.

Members of the Phillips Petroleum Co.'s technical staff, grouped in the Central Texas district, include L. A. Weber and Dan Sholtus, petroleum engineers on the Waggoner ranch, and L. B. Wood, superintendent of gasoline plants, Breckenridge, Stephens County

EAST CENTRAL TEXAS COMPLETIONS

Anderson County

Tide Water Associated and other No. 17-A Wills, 4,072-81 feet, 113 bbls. in 24 hours through one-eighth inch choke. Todd and others No. 1 Todd, Boggy Creek field, dry and abandoned at 2,450 feet.

Franklin County

Housh and others No. 5 Owings, 4,130-4,320 feet, 129 bbls. in 24 hours through one-quarter inch choke. McAlister Fuel Co. No. 9 Crawford, 4,105-4,310 feet, 14 bbls. per hour on pump.

Hopkins County

Hager & Luce No. 3 Reynolds, 4,537 feet, 25 bbls. per hour.

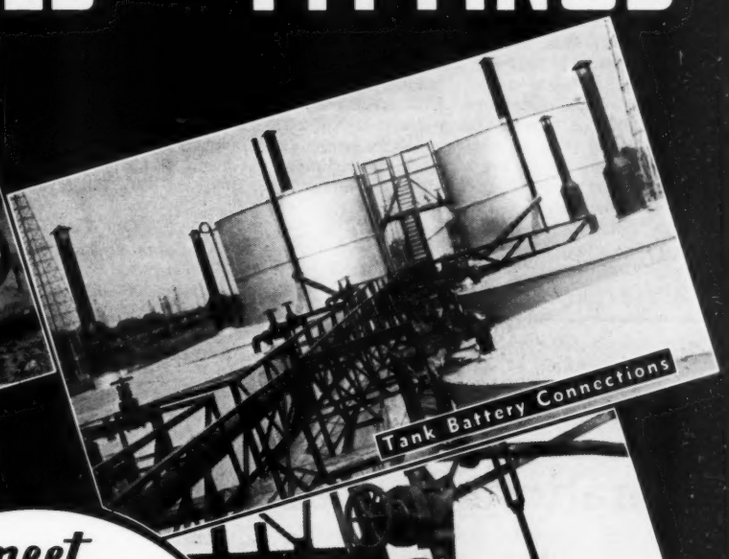
Hunt County

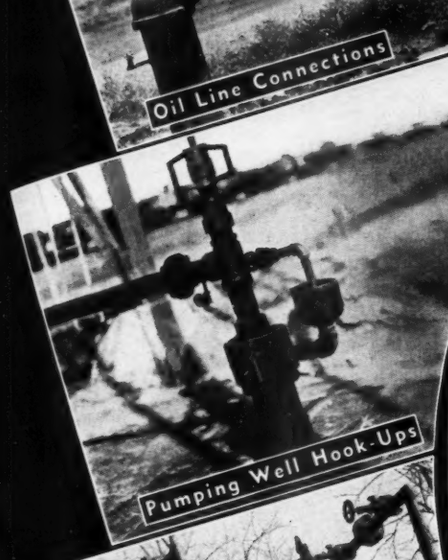
Superior Oil Co. No. 1 P. D. Paul, dry and abandoned at 6,501 feet, 4½ miles northeast of Quinlan; top massive anhydrite 5,190 feet.

Rains County

Humble Oil & Refining Co. and others No. 1

JARECKI VALVES and FITTINGS





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See JARECKI Section, 1937 Composite Catalog.

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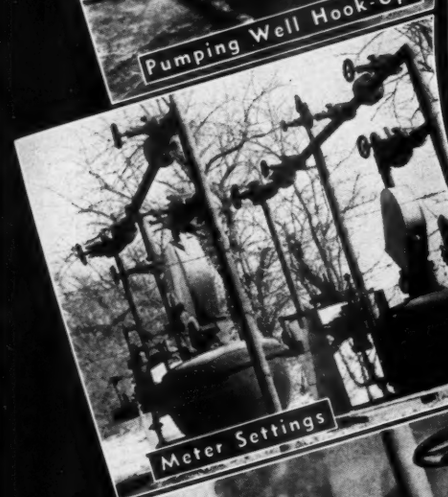

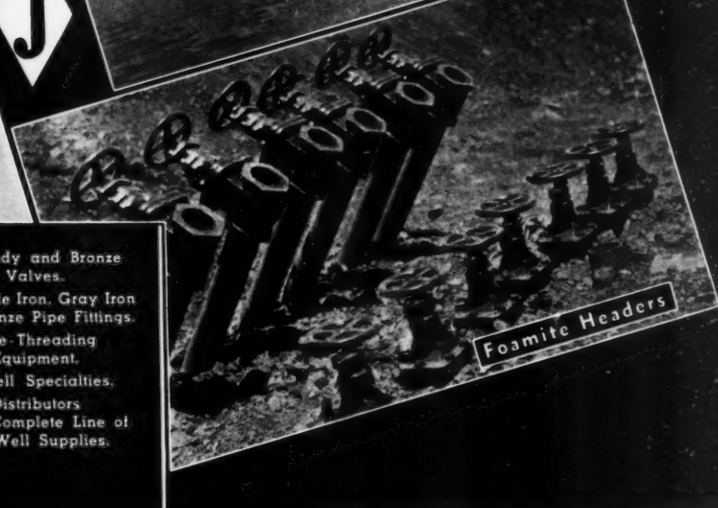

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Easter (Johnson), 5 miles northwest of Alba, dry and abandoned at 8,482 feet; Travis Peak 7,665 feet; elevation 438 feet.

Titus County

Ajo Oil Co. No. 1 Cato, 4,285-4,350 feet, 10 bbls. per hour on pump. Hinton and others No. 1 P. Davis, 4,169-4,340 feet, 12 bbls. per hour through quarter-inch choke. Housh and others No. 2 J. Hargrove, 4,180-4,340 feet, 120 bbls. in 24 hours. Humble Oil & Refining Co. No. 1 C. W. Graft, 4,365 feet, 147 bbls. in 24 hours, 18 gravity oil; No. 3 R. L. Riddle, 4,329 feet, 259 bbls. in 24 hours through quarter-inch choke. Magnolia Petroleum Co. No. 9 W. H. Crawford, 4,190-4,310 feet, 15 bbls. per hour on pump. Alex McCutchin No. 2-31 Burke, 4,300-40 feet, 11 bbls. per hour, swabbing.

McIntyre and others No. 1 J. B. Stevens, junked and abandoned 5,074 feet, 8 miles southwest of Mount Pleasant; elevation 348 feet. J. S. Rushing No. 3 C. T. Mitchner, 4,243-4,300 feet, 101 bbls. in 24 hours, on pump. Tide Water Associated No. 4 Carr, 4,198-4,315 feet, 225 bbls. in 24 hours through quarter-inch choke.

EAST TEXAS COMPLETIONS

Rusk County

Birdsong No. 1-A Jones, 3,660-81 feet, 20 bbls. in four hours on pump. Shell Petroleum Corp. No. 27 Russell, 3,691-3,729 feet, 33 bbls. in 30 minutes. Wheelock & Collins No. 19-A Wells, 3,700-10 feet, 35 bbls. per hour. Amerada Petroleum Corp. No. 29 Stovall, 3,622-52 feet, 40 bbls. per hour. Birdwell Oil Co. No. 2 Rogers-Tipps, dry and abandoned at 3,617 feet.

Gulf Oil Corp. No. 12 Thrash, 3,698-3,712 feet, 40 bbls. per hour through three-quarter inch choke. Humble Oil & Refining Co. No. 24 Thompson, 3,680-3,790 feet, 40 bbls. per hour. Magnolia Petroleum Co. No. 17 Mason, 3,621-70 feet, 45 bbls. per hour. Frank Markey and others No. 1-24 De Guerin, 50 bbls. per hour. Ohio Oil Co. No. 35 Moores, 3,650-3,720 feet, 35 bbls. per hour.

Gregg County

Arkansas Fuel Oil Co. No. 43 Burnside, 3,488-3,513 feet, 60 bbls. per hour. Barnsdall Oil Co. No. 18 Adams, 3,580-84 feet, 15 bbls. in 15 minutes. Gulf Oil Corp. No. 72 Judge, 3,523-84 feet, 60 bbls. per hour. Shell Petroleum Corp. No. 17 Aiken, 3,572-3,635 feet, 30 bbls. in 30 minutes.

Stanolind Oil & Gas Co. No. 6-C Harley, 3,562-3,627 feet, 54 bbls. per hour; No. 54-B McKinley, 3,603-52 feet, 49 bbls. per hour; No. 16 P. McGeorge, 3,445-84 feet, 52 bbls. per hour. Sun Oil Co. No. 26 Aiken, 3,536-93 feet, 32 bbls. in 30 minutes. Gralenor Oil Co. No. 13 King, 3,709-10 feet, 40 bbls. per hour. Magnolia Petroleum Co. No. 10 Davis, 3,632-44 feet, 20 bbls. in 20 minutes; No. 34 Radford, 3,644-46 feet, 88 bbls. per hour.

H. R. Smith, Inc., No. 4 Peterson, 3,538-52 feet, 30 bbls. per hour. Sun Oil Co. No. 42 Cole, 3,516-40 feet, 60 bbls. per hour. The Texas Co. No. 7 Radford, 3,633-35 feet, 24 bbls. per hour.

Upshur County

Barnett Petroleum Corp. No. 3-A Cannon, 3,645-47 feet, 20 bbls. per hour on swab. Day & Co. No. 7 Victory, 3,640-42 feet, 40 bbls. per hour. Magnolia Petroleum Co. No. 2 Cone, 3,754-62 feet, dry and abandoned.

Central West

Operations in Central Ohio, Kentucky, Illinois, Indiana

By GEORGE A. WHITNEY

FINDLAY, Ohio, Mar. 15.—There was little change in the status of the Pure Oil Co.'s two wells in Clay and Wayne counties which are showing oil. No. 1 Bradley in section 26-1n-7e, Wayne County, produced 60 bbls. of oil in one hour and 30 bbls. the next and then "went dead." It also produced gas at the rate of 1,500,000 feet per day. Sand was topped at 2,970 feet, total depth 2,972 feet. The oil tests 39 gravity and is dark in color. No. 1 Weiler in section 33-3n-8e, Clay County, was plugged back from 2,615 feet to 2,612 feet to shut off water. It pumped 45 bbls. of oil before the water broke in.

Pure Oil Co. has two rotary outfits on its block but the location of the wells they are to drill is not yet known.

In Marion County, Adams Louisiana Oil Co. is starting No. 2 in section 21-4n-1e, 1,165 feet north of No. 1, and has rotary on location for No. 3, 880 feet west of the location for No. 2.

Louisiana Oil Co. is rigged up to start No. 2 on the Merriman lease, in section 20-4n-1e, Patoka Township, Marion County. In the same county, SW SE section 12-4n-4e, Meacham Township, in what is believed to be the center of the Iola dome, Eddington & Co. are down 1,300 feet on the H. Nichols property. In section 13-3n-1w, Kahlert & Hawley are rigged up on the Ducomb farm. In section 27-4n-1e, Patoka Township, Wiser Oil Co. is moving machinery on its block for a test about one-half mile south of the village of Patoka.

In Clinton County, section 11-1n-2w, Lake Township, Carl Willi & Co. No. 1 Nolting farm was completed in the Chester sand at 1,355 feet with a show of 4 bbls. but will be tested again in the hope of increasing production. In the same county, section 32-2n-3w, J. Newton & Co. No. 1 M. Langhauser was drilled to a total depth of 1,051 feet without a show of oil or gas and has been abandoned.

In Christian County, NE SW section 29-12n-2w, Nokomis Oil Co.'s second test on the N. Glass lease was completed as a failure; total depth 1,125 feet.

Near Ina, Ill., in Jefferson County, section 20-2s-2e, a short distance from the holdings of the Gulf Oil Corp., E. L. Dee & Co. have erected a derrick in their block a short distance from an old well that made a good showing of oil.

Mahutska Oil Co. No. 9 Mark Madden, in NW NE section 7-1n-11w, Wabash County, was drilled to a total depth of 1,452 feet without a show of oil or gas and has been abandoned.

INDIANA FIELD

Operations in the Indiana fields are still being hampered by bad weather and minor flood conditions, as it is reported that many small streams are flooding their banks and making access to locations difficult. In Decatur County, NW NW of section 18-8n-9e, Sand Creek Township, T. E. Castor completed a test on the Daniel Hull lease as a commercial gas well. The well was drilled to a total depth of 986 feet.

In Sullivan County, section 6-9n-10w, Fairbanks Township, Wyman & Brown are drilling No. 6 on the Joe Thomas property.

In Daviess County, section 34-3n-5w, Barr Township, Parker & Loyd are drilling a test on the Charles Graves property.

CENTRAL OHIO

In Hocking County, section 5, Laurel Township, Kelch Brothers No. 1 Frank Edwards, which was completed in the White shale at 1,558-65 feet with a small showing of gas, was shot with 2,000 pounds of gelatine and was abandoned when the shot did not increase production.

In Fraction 12, Knox Township, Vinton County, Powers is drilling No. 11 on the Cameron Clark property.

Ohio Fuel Gas Co. No. 1 Susan Immel, in section 26, Congress Township, Wayne County, was drilled through the Clinton sand at 3,125-37 feet without a showing of oil or gas and has been abandoned.

In Huron County, section 3, Hartland Township, McCorkill & Co. No. 1 W. and M. Bellamy gauged 10,000 feet of gas in the Black shale at 300-07 feet and had a rock pressure of 100 pounds. In section 2, Bronson Township, Williams & Co. are completing the test on the L. and F. Chapin farm.

East Ohio Gas Co. No. 3 H. B. McDowell, in section 15, Plain Township, Stark County, was completed in the Clinton sand at 4,555-87 feet and gauged 260,000 feet of gas after a shot. In section 21, same township, Lyons & Co. are moving a rig on location for a test on the E. Longenbaugh farm. In section 9, Jackson Township, East Ohio Gas Co. is rigged up for the second test on the C. H. Rudy lease.

Lichfield Development Co. No. 1 C. and A. Hines, in Lot 45, Litchfield Township, Medina County, was drilled through the Berea sand at 399-468 feet and made a small amount of gas. No gauge was taken and the well was sold to the occupant of the farm. In Liverpool Township, section 8, Obermiller Brothers No. 2 William Szoke was completed below the Clinton sand at 2,772-79 feet and made 600,000 feet of gas naturally.

In Summit County, section 18, Green Township, East Ohio Gas Co. No. 3 William Ritter gauged 942,000 feet of gas in the Clinton sand at 4,088-4,111 feet after a shot.

In Lorain County, section 4, Lagrange Township, C. J. Daugherty No. 1 E. Nichols made 32,000 feet of gas in the Clinton sand at 2,289-95 feet and may be abandoned. In Lot 87, Grafton Township, M. C. Rogers & Co. are rigged up for a test on the Augusta Neff farm.

Ohio Fuel Gas Co. completed a commercial gas well on the C. L. Fawcett property in section 24, Butler Township, Knox County. This well was drilled through the first Clinton at 2,931-55 feet, where it made a show of oil, and through the second Clinton sand at 2,969-86 feet, where the gas was found. In section 23, Union Township, Upham Gas Co. No. 1 Julius Smith made 300,000 feet of gas in the Berea sand at 835-45 feet and has been turned into the line temporarily.

In Licking County, Licking Township, Ohio Fuel Gas Co. No. 1 Mary McCracken was drilled through the Clinton sand to 2,722 feet without a show of oil or gas and was abandoned. In section 1, same township, Wehrle Gas Co. No. 1 John Murphy has made a good show of oil at 750 feet. In section 14, Fallsbury Township, Blue Rock Oil Co. is rigged up for No. 3 on the V. L. Smith property.

H. E. Perkins No. 1 Matilda Fortune, in section 10, Tiverton Township, Coshocton County, was drilled through the second Clinton at 3,167-82 feet and abandoned after making a small show of gas. In section 1, Jefferson Township, Ohio Fuel Gas Co. has abandoned the location on the Russel Bower farm.

In Harrison County, section 10, Franklin Township, Frank Lyons, No. 1 Ross Patterson & Co. is drilling in the Oriskany sand at 5,350 feet.

Cambridge Glass Co. No. 4 G. E. Slaughter, in section 4, Cambridge Township, Guernsey County, was completed in the top Berea sand at 1,045 feet and gauged 250,000 feet of gas after being shot with 25 quarts. In the same section, George Kernodle No. 1 C. B. Hutchinson was drilled to 1,157 feet and shut in. It tested 103,000 feet of gas. In section 15, Jefferson Township, Roushauson & Ridgeway completed the second test on the Gillespie heirs property as a gas well. The well gauged 577,000 feet of gas at 1,177-78 feet. In section 6, same township, George Jewell is rigged up for a second test on the Henry Armstrong lease and in the same section George Kernodle is rigged up on the Walter Burnsworth property. In section 10, Liberty Township, Ferguson & McCullough are rigged up on the L. D. Tucker farm.

In Tuscarawas County, section 3, Sandy Township, East Ohio Gas Co. No. 1 George Lebold is drilling below 4,500 feet, and in section 1, Washington Township, George Jewell is building a rig on the Frank Helter farm.

In Morgan County, section 12, Marion Township, Penn Construction Co. is rigged up to deepen No. 2 Ward White.

Bert Robinson No. 1 J. W. Miracle, in section 9, Franklin Township, Monroe County, gauged 37,856 feet of gas in the second Salt sand at 892-902 feet, made a showing of oil in the Lime sand at 1,190-96 feet and is pumping 1 bbl. of oil and gauging

(Continued on Page 104)

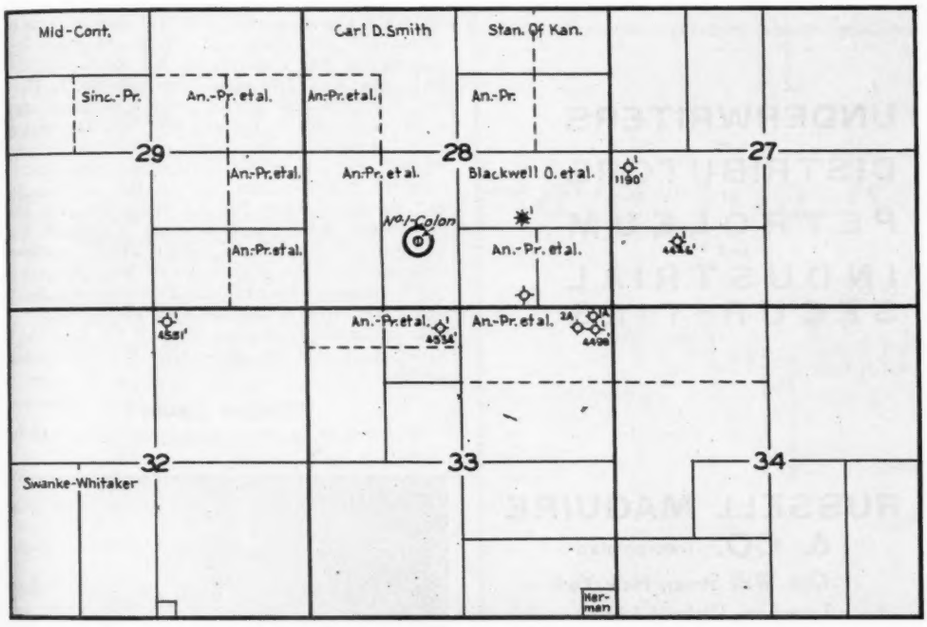
Oklahoma Operations

By
DAL DALRYMPLE

WILDCATS IN FOUR SECTORS MAY OPEN NEW OIL FIELDS

Thirteen producers in the Fitts field and seven in the Olympic pool were completed the past week to set the pace for Oklahoma proven areas, but several of the state's wildcats, some just starting and others nearing completion, held interest of oil men. Wildcats in Lincoln, Seminole, Tillman and Okmulgee counties gave promise of opening new producing areas.

Anderson-Prichard Oil Corp. No. 1 Colon, C N half SE SW 28-17-4e, in northern Lincoln County, had first Wilcox sand at 4,345-69 feet, cleaned itself and gas was estimated from 5,000,000 to 8,000,000 feet. Operators were preparing to drill in with cable tools. Blackwell Oil & Gas Co. is interested with Anderson-Prichard in the block. Sun Oil Co. has three 40-acre tracts offsetting the well.



Anderson-Prichard Oil Corp. No. 1 Colon, section, 28-17-4e, Lincoln County wildcat, was due to drill in this week. Gas was estimated from 5,000,000 to 8,000,000 feet.—(Mid-Continent Map Co., Tulsa)

Several dry holes and one gas well previously have been drilled in this area.

Sinclair Prairie Oil Co. No. 1 Rossanna, NW NW SW section 28-10-8, southwest of the Cromwell field and east of the North Bethel pool in Seminole County, is a prospective Cromwell sand pool opener. It found saturation in a core at 3,400-05 feet, and was waiting on cement after setting 9-inch casing at 3,380 feet.

Indian Territory Illuminating Oil Co.'s wildcat that was hailed as a pool opener in Tillman County several weeks ago, only to have water intrude, may yet be completed as an oil well. It is the No. 1 Hatler, SW SW NE section 32-2s-17w, south of Frederick. It was reported pumping 7 or 8 bbls. of oil an hour from lime at 4,414-25 feet, with water exhausted. It originally was bottomed at 5,169 feet, but plugged back to 4,525 feet.

George F. Martin No. 1 Reneau, SW SE NW section 4-13-11, near Nuyaka, western Okmulgee County, was reported showing oil and gas and was considered a probable Dutcher sand pool opener. Operators were preparing to drill into the sand, topped at 2,490 feet.

Pontotoc County

Thirteen new oil wells and one failure were recorded in the Fitts field, Pontotoc County, the past week. H. L. Blackstock No. 5-A Moody, NE SW SW section 23-2n-7, was one of the larger of the new wells. It topped Hunton lime at 3,517 feet; Sylvan, 3,895 feet; total depth, 3,895 feet. It was treated with 10,000 gallons of acid and flowed 560 bbls. of oil gross in two and one-half hours. After reacidizing with 10,000 gallons, it flowed 668 bbls. of oil gross in one hour and made potential of 4,024 bbls. Same operator's No. 4-A Moody, SE SW SW section 23-2n-7, flowed 360 bbls. of oil in one hour after acid treatment; was reacidized and flowed 500 bbls. gross in one hour, making potential of 3,752 bbls. Top of Hunton lime was 3,466 feet; Sylvan, 3,840 feet; total depth, 3,841 feet. Same operator's No. 3 Lewis, SW SE SE section 19-2n-7, topped Viola lime at 4,078 feet; total depth, 4,415 feet; acidized and flowed 360 bbls. of oil in one hour; reacidized, and made potential of 1,065 bbls.

E. H. Moore and others No. 1 Burris, C N half S half section 22-2-7, made potential of 4,133 bbls. of oil. It flowed 509 bbls. of oil in two hours after acidizing. Top of Hunton lime was 3,597 feet; total depth, 3,630 feet.

Skelly Oil Co. No. 10 Metropolitan Life, SE NW SW section 23-2n-7, flowed 241 bbls. of oil in one and one-half hours after acid treatment and made potential of 4,384 bbls. Top of Hunton lime was 3,625 feet; Sylvan shale, 4,003 feet; total depth, 4,015 feet. Same company's No. 18 Park College, SW SW NE section 28-2n-7, topped Hunton lime at 3,235 feet; Sylvan shale, 3,489 feet; total depth, 3,490 feet. It was treated with 10,000 gallons of acid, flowed 378 bbls. of oil in two hours and made potential of 3,527 bbls.

Bishop Oil Co. No. 5-A Simpson, NW cor. section 28-2n-7, was bottomed at 3,757 feet, after topping Hunton lime at 3,472 feet and Sylvan shale at 3,757 feet. It was acidized, flowed 350 bbls. of oil gross in one hour and made potential of 2,553 bbls.

Stahl Petroleum Co. No. 9-B Dennis, SW NW SW section 21-2n-7, made potential of 3,954 bbls. of oil after flowing 165 bbls. in oil through tubing in one hour following acidization. It topped Hunton lime at 3,714 feet; Sylvan shale, 4,070 feet; Viola lime, 4,192 feet; total depth, 4,360 feet. Water intruded and it was plugged back to 4,170 feet to complete.

Sinclair Prairie Oil Co. No. 15 Woolley B, SW NE SW section 22-2n-7, found Viola lime at 4,090 feet and was bottomed at 4,375 feet. It was treated with 15,000 gallons of acid, flowed 304 bbls. of oil gross in three hours and made potential of 982 bbls. Same company's No. 17 Woolley B, NE SE SW section 22-2n-7, made potential of 3,707 bbls. after acidizing with 12,000 gallons. It topped Hunton lime at 3,527 feet; total depth, 3,635 feet.

Estimated Daily Production

Estimated daily average production of Oklahoma for the week ending March 13, and for the preceding week, was as follows:

	Barrels	
	Mar. 13	Mar. 6
Allen	6,450	6,706
Burbank	7,500	7,350
South Burbank	16,750	16,000
Balance Osage	21,750	21,000
Blackwell district	4,950	4,975
Bristow-Slick	8,000	7,925
Chandler	3,675	3,625
Crescent	12,950	12,700
Cromwell	3,275	3,250
Cushing-Shamrock	10,500	10,375
Duncan district	3,825	3,775
Edmond	23,475	15,625
Fish	7,000	7,000
Fitts	84,675	76,125
Graham	4,725	4,675
Gray	1,350	1,425
Healdton	9,650	9,675
Hewitt	4,325	4,250
Holdenville	900	925
Keokuk	7,000	8,375
Konawa	1,575	1,700
Lucien	13,500	13,025
Marshall-Lovell	850	800
Oklahoma City	141,750	131,875
Olympic	15,575	14,675
Papoose	925	950
Polo	1,750	1,750
Sasakwa and townsite	3,025	3,050
Sholem-Alechem	3,250	3,150
Seminole:		
Bowlegs	9,925	11,575
Carr City	5,775	5,775
Earlsboro	6,075	5,975
South Earlsboro	725	725
East Earlsboro	7,875	7,875
Little River	11,500	11,400
East Little River	1,175	1,150
Maud	850	825
Mission	2,250	2,250
Seminole	9,925	10,125
East Seminole	3,675	3,675
Searight	4,825	5,050
Total Seminole	64,575	66,400
St. Louis-Pearson	22,350	21,775
Tatums	4,250	4,225
Tonkawa-Barber-Thomas	6,750	6,500
Wewoka	3,675	3,750
Yale-Jennings	4,150	4,025
Other pools	80,250	74,725
Total Oklahoma	615,925	603,000

More Fitts Wells

J. Paul Getty No. 2 Masters, NE NE SW section 23-2n-7, was bottomed at 3,855 feet, acidized with 3,000 gallons and flowed 360 bbls. of oil net through tubing in 12 hours. It was reacidized with 7,000 gallons, flowed 437 bbls. of oil gross through casing in one hour, with no water, and made po-

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tential of 2,136 bbls. It previously had produced a large amount of water, but was plugged back and then drilled deeper to complete.

Stanolind Oil & Gas Co. No. 10 Harden, NE NW SW section 30-2n-7, topped Hunton lime at 3,272 feet; Sylvan shale, 3,545 feet; total depth, 3,565 feet. After acidizing, it flowed 391 bbls. of oil gross in one hour and 45 minutes and made potential of 2,233 bbls.

Magnolia Petroleum Co. No. 10 Harden, NW NW NE section 30-2n-7, made potential of 2,225 bbls. of oil after acidizing with 10,000 gallons. Top of Viola lime was 3,976 feet; Bromide, 4,233 feet; first sand, 4,315 feet; total depth, 4,345 feet.

Continental Oil Co. No. 3 Holkum, NE NW SW section 27-2n-7, which has been shut down since last December, was temporarily abandoned. It was bottomed at 3,540 feet. It would not flow, and was acidized with 7,000 gallons. Then it flowed 163 bbls. of oil net in one-half hour on gas lift. After second acidization with 1,000 gallons, it made one head flow of 105 bbls. on gas lift; afterward, bailed 10 bbls. of oil in 24 hours and bailed dry. It was put on the pump and pumped one-half barrel of oil in 30 minutes before shutting down. It is on the south side of the east extension of the field.

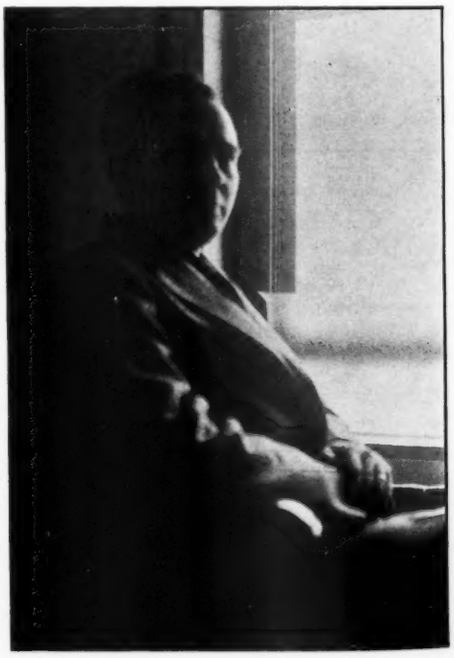
Boettcher Oil & Gas Co. No. 2 Haney, NW NW SW section 24-4n-7, East Ada district, had sand at 1,738 feet; total depth, 1,745 feet; shot and pumped 15 bbls. of oil in 24 hours.

A. L. Bowles No. 1 fee, SE SE NW section 22-5-8, an old well in the Allen area, was deepened from 480 feet to 904 feet and was dry and abandoned.

New work in Pontotoc County: Burke-Greis Oil Co. No. 6 Chambers, SW NW NW section 36-2n-6, an old well, preparing to plug back; Magnolia Petroleum Co. No. 4 Morin, SE NE SE section 20-2n-7, cellar and pits; same company's No. 12 Harden, NW NW NE section 30-2n-7, building rig; E. H. Moore No. 1 Ingram, NW SE NE section 22-2n-7, location; same operator's No. 2-A Harper, SE SW NE section 29-2-7, location; same operator's No. 7-A Schauers, SE SE NW section 29-2n-7, location; Moore No. 2-A Woodruff, NW NE SE section 29-2-7, location; same operator's No. 6-A Wodruff, SE NE SE section 29-2-7, location; same operator's No. 8-A Smith, SE NE NW section 31-2-7, digging cellar; Phillips Petroleum Co. No. 2 Bates, NW NE NW section 26-2-7, an old well, rigging up rotary to deepen; Mary F Oil Co. No. 4 Miller, C N half NE SE section 16-5-8 repairing machine.

Okfuskee County

The largest of seven new wells completed in



W. T. Payne, president of the Big Chief Drilling Co., Oklahoma City, Okla., takes a minute out of a busy day to be portrayed

the Olympic field, Okfuskee County, was Stanolind Oil & Gas Co. No. 5 Bunner, NE cor. section 25-10-8. It topped Senora sand at 1,828 feet; total depth, 1,848 feet; was shot with 30 quarts and flowed 481 bbls. of oil through tubing in 24 hours.

Sinclair Prairie Oil Co. No. 4 Fisher, NW SW SW section 19-10-9, flowed 227 bbls. of oil in 24 hours after a shot and was completed at 1,837 feet, total depth. Top of Senora sand was 1,820 feet. Same company's No. 5 Fisher, SE SW SW section 19-10-9, topped Senora sand at 1,812 feet, was bottomed at 1,832 feet, shot with 40 quarts, and flowed 175 bbls. of oil through tubing in 24 hours.

Another producer was completed by Manahan Oil Co. at No. 2 Bunner A, NE SE SE section 24-10-8. It was shot with 10 quarts and flowed 140 bbls. of oil in 24 hours. Senora sand was topped at 1,842 feet; total depth, 1,847 feet.

Chapman & McFarlin No. 5 Williams, NE NW NW section 30-10-9, topped Senora sand at 1,756 feet; total depth, 1,800 feet; shot with 80 quarts and flowed 114 bbls. of oil in 24 hours.

Blackwell Oil & Gas Co. and Phillips Petroleum Co. completed No. 2 Lehmar, SW NW NW section 17-10-9, at 1,925 feet, total depth. It flowed 50 bbls. of oil in four hours and pumped 100 bbls. in 24 hours after shot. Top of Senora sand was 1,856 feet.

Howard-Sherman and others No. 1 Bridges, NW SW SW section 8-10-9, had Senora sand at 1,846 feet; was bottomed at 1,882 feet; plugged back to 1,880 feet, shot with 60 quarts and pumped 46 bbls. of oil in 24 hours.

Three new wells were completed elsewhere in Okfuskee County. Berry and others No. 1 Deer, NE NE NW section 28-10-11, had lower Gilcrease sand at 2,633-44 feet, total depth; shot and swabbed and flowed 120 bbls. of oil in 24 hours. Prince & Anderson No. 5 Likowski, C N half NW SW section 23-11-11, had a hole full of water and was dry and abandoned at 2,053 feet, total depth. Commercial Co. No. 2-A Comey, NW NW NE NE section 26-12-11, had Deaner sand at 2,608-51 feet; total depth, 2,669 feet; shot and pumped 40 bbls. of oil in 24 hours.

Harvey Oil Co. No. 1 Stewart, NE cor. section 28-10-9, wildcat, was an abandoned location.

First reports of new work in Okfuskee County follow: Manahan Oil Co. No. 4 Bunner A, NE NE SE section 24-10-8, location; Sinclair Prairie Oil Co. No. 6 Fisher, SW NW SW section 19-10-9, location; same company's No. 7 Fisher, SW SE SW section 19-10-9, location; Chapman & McFarlin No. 12 Williams, NW NE NW section 30-10-9, set 10-inch casing at 39 feet.

Seminole County

A new producer was completed in the North Bethel pool, Seminole County, at Amerada Petroleum Corp. and others No. 3 Yahola, SE NW NW section 36-10-7. It found Cromwell sand, the producing horizon, at 3,640 feet; total depth, 3,659 feet, and made potential of 834 bbls. of oil. It is offset by producers on the north and east, northeast and southeast.

Amerada Petroleum Corp. and others No. 2 Parks, SE NE SW section 35-11-5, northwestern Seminole County, found Wilcox sand at 4,625 feet and was bottomed at 4,634 feet. It swabbed 382 bbls. of oil in eight hours and pumped 209 bbls. in seven hours.

In the East Seminole area, Texas Co. No. 3 Grisso, NE NW NW section 16-9-7, found Cromwell sand at 3,435 feet; total depth, 3,457 feet. Initial production was 120 bbls. of oil in 9 hours. Later, it flowed 188 bbls. of oil through tubing in 24 hours and was completed. Deep Rock Oil Corp. No. 3 Lozier, NE SW NW section 20-9-7, topped Cromwell sand at 3,495 feet; had a hole full of water at 3,516 feet, total depth, and was abandoned.

Papoose Oil Co. and others No. 1 Yarber, SW SW NW section 15-11-8, wildcat in northeastern Seminole County and southwest of the Dill pool in Okfuskee County, was dry and abandoned at 3,615 feet, total depth. It topped Calvin sand at 2,000 feet; brown lime, 3,190 feet; Booch sand, 3,338 feet; Gilcrease, 3,380 feet; trace of sandy Wapanucka, 3,581 feet; Cromwell sand, 3,582 feet. No showing of oil were found.

Three new Seminole County tests were reported. Magnolia Petroleum Co. No. 4 fee, NW SW SW section 9-9-7, East Seminole area, had dug cellar

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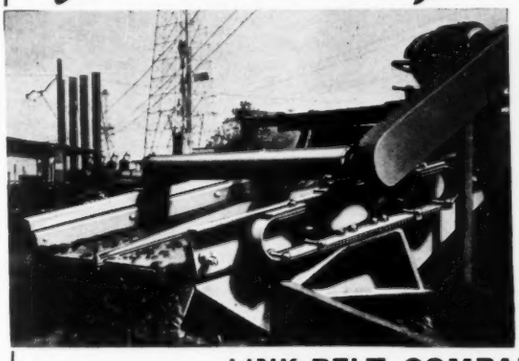

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and pits. Texas Co. No. 1 Williams, SE NW SW section 25-10-7, North Bethel pool, was building rig. Amerada Petroleum Corp. and others No. 4 Parks, SW SE SW section 35-11-5, had dug cellar and pits.

C. J. Wrightsman No. 4 May, NW SW SW section 25-10-7, northwest side of the North Bethel pool, was an abandoned location.

Oklahoma County

The only new oil well completed in Oklahoma County was Texas Co. No. 1 School Land, SE SE NE section 36-14-4w, in the Edmond field. It found Simpson Dolomite at 6,505 feet; first Wilcox sand, 6,605 feet; total depth, 6,704 feet. Water intruded after acid treatment, and it was plugged back to 6,580 feet. Casing was perforated and it was acidized, shot and reacidized. It flowed 370 bbls. of oil in 24 hours, with 22 per cent salt water. Later, on potential test, it flowed 180.26 bbls. of oil in four hours and made potential of 1,082 bbls. It is on the west side of the Edmond field.

E. W. Jones No. 1 Hediger, NW NW SE section 6-13-3w, topped first Wilcox sand at 6,675 feet; cleaned out to 6,685 feet, where drill stem test failed; plugged back to 6,600 feet; drilled cement to 6,619 feet, produced only water and was abandoned. It was the farthest south test in the Edmond field.

British American Oil Producing Co. No. 2 Francis, NE SW SE SW section 22-12-3w, an old well in the Oklahoma City field, was deepened from 6,500 feet to 6,505 feet; flowed 1,202 bbls. of oil on gas lift in 24 hours and was recompleted.

Two new tests were reported in the Britton field, Oklahoma County. Olson Oil Co. No. 1 Harkins, SW SW SE section 20-13-3w, was building rig. Galt-Brown No. 1 Belle McGrew, Turk and others, NW NE SW section 20-13-3w, was digging cellar and pits and moving in tools.

Logan County

Champlin Refining Co. No. 1 Pfeiffer, NE NE NW section 4-19-2w, on the south edge of production in the Lucien field, Logan County, topped second Wilcox sand at 4,925 feet; total depth, 5,042 feet. It flowed 2,551 bbls. of oil in 12 hours and made potential of 4,796 bbls. Gas averaged 3,850,000 feet.

One new test was reported in Logan County. Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 6 Pfeiffer, SW NW SW section 33-20-2w, was building rig.

Cleveland County

Another gusher was completed in the Moore field, Cleveland County. Sinclair Prairie Oil Co. and others No. 2 Rice A, SE SE NE section 28-10-2w, topped second Wilcox sand at 7,254 feet and was bottomed at 7,276 feet. On potential test, it flowed 3,775 bbls. of oil in four hours and made potential of 19,406 bbls. Gas average 38,800,000 feet.

Osage County

Coralena Oil Co. No. 5 Swanson, SW NE NW section 21-25-6, South Burbank field, Osage County, topped Bartlesville sand at 2,749 feet; had first oil at 2,770 feet; total depth, 2,774 feet. It swabbed and flowed 96 bbls. of oil in the first 24 hours, 100 bbls. the second 24 hours and on completion test pumped 123 bbls. in 24 hours.

In the Naval Reserve pool, Lewis Production Co. and Peters Petroleum Corp. No. 5 Osage, SW NW SE section 28-24-7, pumped 55 bbls. of oil in 24 hours after shooting with 60 quarts. It had Bartlesville sand at 2,536-2,620 feet, and was bottomed at 2,634 feet.

Bay Oil Corp. and Ray Branstetter No. 1-A Osage, SW NE SW section 9-22-11, found red granite at 2,127-31 feet, total depth, and was dry and abandoned.

Pure Oil Co. No. 148 Osage, NW SE SW NE section 5-23-8, an old well, was deepened from 1,214 feet to Oswego lime at 2,014-61 feet, total depth. After treating with 4,000 gallons of acid, it flowed 200 bbls. of oil daily through tubing and was recompleted.

New work in Osage County: Pure Oil Co. No. 3 Osage, SE NE NE section 19-22-10, an old well, rigging up machine to deepen; Phillips Petroleum Co. No. 61 Osage, SE SE NE section 21-25-12, location; Indian Territory Illuminating Oil Co. No. 445 Osage, SW SW NW section 31-27-12, cellar and pits.

Pottawatomie County

Gulf Oil Corp. and others No. 1 Barton, SE NE NW section 13-7-4, St. Louis district, Pottawatomie County, topped Wilcox sand at 4,118 feet; total depth, 4,133 feet; pumped 386 bbls. of oil in 14 hours and was completed.

The following new operations in Pottawatomie County were reported: Gulf Oil Corp. No. 1 O'Connor, NW NW SE section 25-6-4, an old well in the Gray pool being deepened from 3,496 feet, waiting on cement at 3,610 feet; same company's No. 2 Benjamin, NW SE NW section 12-7-4, cellar and pits; Hilton Phillips No. 4 Bettis, SE SW SW section 21-7-4, cellar and pits; Sinclair Prairie Oil Co. No. 6 Deatheridge, NE NW NW section 28-7-4, building rig.

Garvin County

One new well was completed in the Tussy pool, Garvin County, at Carter Oil Co. No. 3 Ivey, NE SW SW section 33-1n-3w. It had oil sand at 2,390 feet; total depth, 2,480 feet, and pumped 75 bbls. of oil daily.

Creek County

Two new oil wells and one new gas well were completed and an old gas well was recompleted in Creek County. Carpenter and others No. 1 Marz, SE SE NE section 25-18-10, had Red Fork sand at 1,784-1,804 feet; total depth, 1,805 feet; shot and pumped 15 bbls. of oil daily. Doak & Hughes No. 1 Hodem, SW SE NW section 11-19-9, had Burgess sand at 2,376-83 feet, was bottomed at 2,394 feet, swabbed 20 bbls. of oil in 24 hours; shot and was completed as a 10-bbl. pumper.

Indo Oil Co. No. 1-A Burgess, NE SE SE section 25-18-10, had sand at 1,739-55 feet, total depth; shot and produced 3,000,000 feet of gas.

Sinclair Prairie Oil Co. No. 32 Dacon, SW NE SE section 16-17-7, an old well in the Cushing-Drumright area, was plugged back from 2,405 feet to Wheeler sand at 2,239 feet, produced 2,500,000 feet of gas and was recompleted.

Two new Creek County operations were reported. Ohio Osage Oil Co. No. 1-A Massey, NW NE NE section 31-17-10, was drilling at 350 feet. T. E. Marble No. 4 Tyler, SE NW NE NE section 13-19-7, was a location.

Tulsa County

Two failures were reported in Tulsa County. Swift Brothers and others No. 4 McKee, C NE SW section 13-19-10, had Bartlesville sand at 1,890-95 feet, total depth; water intruded, and it was abandoned. Sinclair Prairie Oil Co. No. 42 Ishmael, NW NW NE section 13-18-12, had Arbuckle lime at 2,023 feet; total depth, 2,065 feet, and was dry and abandoned.

New tests in Tulsa County included Duffield Oil Co. No. 1-A Fisher, SW NW NE SW section 1-17-12, drilling at 300 feet; and Johnson Oil Refining Co. No. 2 Bailey Grimes, NE NE SW section 31-19-10, rigging up machine.

Okmulgee County

W. B. Pine No. 1-A Beams, CWL SE SE section 4-15-14, Okmulgee County, had sand at 1,597-1,610 feet, total depth, flowed 150 bbls. of oil in 24 hours and was completed.

J. L. Selby No. 1-A Grayson, C E half NW NE section 3-14-14, flowed 75 bbls. of oil in 24 hours from sand at 1,675-83 feet, total depth, and was completed.

The third oil well of the week in Okmulgee County was Art Thompson No. 1-A Burgess, CSL S half NE section 26-12-12. It pumped 5 bbls. of oil daily from sand at 2,387-93 feet, total depth.

J. M. Glass No. 1-A Hudson, CSL SE NW section 17-14-15, had a hole full of water in Glenn sand at 1,627-45 feet, total depth, and was abandoned.

New work in Okmulgee County: James Wise and others No. 1-A Berryhill, NW SW SW section 10-12-12, rig; Eagle Picher Lead & Zinc Co. No. 2 Henry, NW NW SE section 27-12-12, an old well, cleaning out to deepen; Kirk S. White No. 1-A Richards, NE SW SE section 22-15-11, location; Abe LaBenne No. 8 Hill, SE NE SW section 23-15-11, cleaning out at 1,836 feet; W. B. Pine No. 2-A Beams, SE NW SW SE section 4-15-14, machine.

Muskogee County

Frank Buttram and others No. 1 Robbins, SE SE NW section 20-15-20, wildcat in northeastern Muskogee County, topped Sylvan shale at 90 feet; Viola lime, 135 feet; Tyner, 223 feet; Burgen, 287 feet; Arbuckle lime, 420 feet; had a hole full of water in hard lime at 706 feet, total depth, and was dry and abandoned.

Conrad Lambert No. 1 Friday, SE SE SW section 5-15-15, was moving in machine for a new Muskogee County test.

Haskell County

Continental Oil Co. No. 1 Anderson, SW SE NE section 33-8-20, was location for a wildcat in Haskell County. It is south of the Kinta gas area.

Pawnee County

Forrest Development Co. No. 1 Greisel, C NW NE section 21-21-5, Pawnee County wildcat, was dry and abandoned at 3,275½ feet, total depth. It bailed a small amount of oil, but hole bridged at 3,210 feet and the crew was unable to knock the bridge out. Cores taken at 3,265-71 feet were saturated with oil.

Lincoln County

Fleetborn Oil Corp. No. 1 Turner, NW NW SE section 28-17-5, an old wildcat that opened a new area in northern Lincoln County, plugged back from old total depth of 3,994 feet, in Wilcox sand, to 3,973 feet; perforated casing from 3,959 to 3,973 feet, and produced 8,700,000 feet of gas.

Carter County

Sinclair Prairie Oil Co. No. 6 Daugherty, SW NE NE section 29-2s-3w, was an abandoned location in the Fox area, Carter County.

This Phillips Petroleum Co. group in the St. Louis field in Pottawatomie County, Oklahoma, includes C. B. Jordan and C. L. Montgomery, of the well service department, Seminole, and R. C. Quinn, production foreman, St. Louis

Hefner & Bray No. 1 Perkins, SE cor. section 4-1s-3w, Carter County side of the Tussey field. was drilling at 20 feet. Karl-Carter No. 1-A Harley, NW SW NW NW section 19-2s-3w, topped sand at 300 feet and was running casing.

Marshall County

Levelle Coal Co. No. 3 Cox B, SW SE NE section 26-7s-5e, Marshall County, had showings of oil and gas but was dry and abandoned at 444 feet, total depth. Same operators had spudder on ground at No. 4 Cox B, SE SE SE NE section 26-7s-5e.

Caddo County

Wasteka Oil Co. completed a big gasser at No. 2-A Melton, NE SW SW section 26-6-10w, Cement area, Caddo County. It had sand at 5,267 feet; total depth, 5,364 feet; and produced 83,000,000 feet of gas, with 2,450 pounds rock pressure.

Stephens County

Mudge Oil Co. No. 10 Robberson, NE SW SW section 10-3s-5w, Loco area, Stephens County, had sand at 1,438-64 feet, total depth, pumped 5 bbls. of oil in 24 hours and was completed.

Raizen Brothers No. 2 Price B, SE NW SW section 10-3s-5w, had a showing of oil and hole full of water in sand at 1,460-70 feet, total depth, and was abandoned.

New work in Stephens County: George L. Pace and others No. 13 Payne, SE NW NW section 28-2s-7w, drilling at 1,200 feet in shale; Raizen Brothers No. 12 Price, NW NW SE SW section 10-3s-5w, drilling at 334 feet; same operators No. 13 Price, NW SW SE SW section 10-3s-5w, machine.

Comanche County

Edwards & Kadane No. 2 Culberson, NW NE NE section 32-2n-10w, Comanche County, topped gas sand at 428 feet; total depth, 470 feet; produced 1,000,000 feet of gas and was completed.

Two new tests in Comanche County were reported. E. E. Reynolds and others No. 1-A Truett, NW SE SE section 26-2n-11w, was rigging up machine. E. B. Hane No. 1 Duper, NW cor. section 21-2n-13w, wildcat, was a machine.

Jackson County

G. L. Scheig No. 2 Cole, SE SW SE section 34-2n-20w, an old well in Jackson County, was deepened from 1,462 feet to Granite Wash at 1,469-74 feet; total depth, 1,476 feet; pumped 35 bbls. of 42 gravity oil and was recompleted. Same operators No. 2 McCarty-Cole, NE SE SW section 34-2n-20w, had dug cellar and pits.

Harmon County

Lialko Trust Co. No. 1 Crasnoe, SE SE SW section 14-3n-25w, wildcat in Harmon County, southwestern Oklahoma, lost circulation at 3,225-33 feet, and was abandoned at 3,363 feet, total depth, in brown shale. It had dry Granite Wash at 3,325 feet.

First Reports

In Kiowa County, Burns and others No. 1 Enzy, NE SE NE section 33-7-20w, was a location. It is in a gas area and will be classed as a wildcat if completed as an oil producer.

In Jefferson County, Gulf Oil Corp. and others No. 1 Woodworth, NW NW NE section 20-3s-4w, wildcat, was a location.

In Garfield County, Ohio Oil Co. No. 1 State, SW cor. section 13-23-3w, wildcat, was a location.

In the Billings area, Noble County, Continental Oil Co. No. 1 Nora Conway, SE SE NW section 21-23-2w, had dug cellar and pits; Phillips Petroleum Co. and Shell Petroleum Corp. No. 9 McCaughtry, SW SW NE section 21-23-2w, was a rig and was moving in rotary tools.

Kansas Fields

(Continued from Page 84)

Siliceous lime, 4,075 feet, and was dry and abandoned at 4,125 feet, total depth.

Stevens County

Another gas well was completed in the Hugoton field, Stevens County. It was Missouri Valley Gas Co. No. 1 Phillips, C S half section 10-35-39w. It produced 8,000,000 feet of gas at 2,752 feet, total depth.

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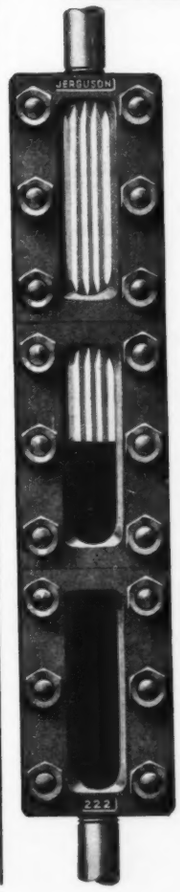

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The list of exhibitors follows:

A-1 Bit Co., Houston, Tex.; Abegg & Reinhold Co., Inc., Los Angeles, Calif.; Abercrombie Pump Co., Houston, Tex.; Ahlberg Bearing Co., Chicago: All Steel Products Manufacturing Co., Wichita, Kans.; Allen, Sproull & Allen, Houston, Tex.: American Chain & Cable Co., Bridgeport, Conn.: American Hammered Piston Ring Co., Baltimore, Md.: American Iron & Machine Works Co., Oklahoma City, Okla.; American Manufacturing Co., St. Louis, Mo.; American Optical Co., Dallas, Tex.; American Roller Bearing Co., Pittsburgh, Pa.; American Sand-Banum Co., Inc., New York; Anderson, Inc., Alexander, Fullerton, Calif.: Atlas Engineering Works, Houston, Tex.; Authorized Appleman Bit Service Co., Inc., Houston, Tex.: Ayres Engineering Co., Houston, Tex.

Baash-Ross Tool Co., Los Angeles, Calif.; Baker Chemical Co., J. T., Phillipsburg, N. J.; Baker Oil Tools, Inc., Huntington Park, Calif.; Baldwin-Duckworth Chain Co., Springfield, Mass.; Baroid Sales Co., Los Angeles, Calif.; Becker, Inc., Christian, New York; Benjamin Electric Manufacturing Co., Des Plaines, Ill.; Bethlehem Steel Co., Bethlehem, Pa.; Bettis Rubber Co., Los Angeles, Calif.; Big Three Welding Co., Houston, Tex.; Black, Sivalls & Bryson, Inc., Oklahoma City, Okla.; *Brown Instrument Co., Philadelphia, Pa.; Byron-Jackson Co., Los Angeles, Calif.

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Dannenbaum Co., M. M., Houston, Tex.: Darling Valve & Manufacturing Co., Williamsport, Pa.: Dean Brothers Co., Indianapolis, Ind.: Dura metallic Corp., Kalamazoo, Mich.

Eastman Oil Well Survey Co., Dallas, Tex.; Edward Valve & Manufacturing Co., Inc., The, East Chicago, Ind.; Erie Tool Works, Erie, Pa.; Everlasting Valve Co., Jersey City, N. J.

Failing Supply Co., Geo. E., Houston, Tex.: Fischer Co., C. A., Fort Worth, Tex.; Fisher Governor Co., Marshalltown, Iowa; Fix Co., Geo. J., Dallas, Tex.; Flagg & Co., Stanley G., Philadelphia, Pa.; France Packing Co., Philadelphia, Pa.: Frick-Reid Supply Corp., Tulsa.

Gardner Denver Co., Quincy, Ill.; Garlock Packing Co., Palmyra, N. Y.; Garrott Brass & Machine Co., Houston, Tex.; Gaso Pump & Burner Co., Tulsa; Gas Power, Inc., Houston, Tex.; Guiberson Corp., Dallas, Tex.; Gulf Engineers, Inc., Houston, Tex.: Gulf Publishing Co., Houston, Tex.

Halliburton Oil Well Cementing Co., Duncan, Okla.; Harnischfeger Corp., Milwaukee, Wis.; Hays Corp., The, Michigan City, Ind.: Hercules Motors Corp., Canton, Ohio; Hewitt-Gutta Percha Rubber Co., Buffalo, N. Y.; Hills-McCanna Co., Chicago; *Houston Oil Field Material Co., Houston, Tex.; Hughes Tool Co., Houston, Tex.; Hyatt Bearings Division, General Motors Corp., Newark, N. J.

International Equipment Co., Boston, Mass.: International Nickel Co., Inc., New York.

Jefferson Union Co., Lexington, Mass.: Jenkins Brothers, Inc., New York; Johns-Manville, New York; *Jones & Laughlin Steel Co., Pittsburgh, Pa.; Joyce-Cridland Co., Dayton, Ohio.

Kennedy Valve Manufacturing Co., Elmira, N. Y.; Kimble Glass Co., Vineland, N. J.; Kinzbach Tool Co., Houston, Tex.; Koppers Construction Co., Pittsburgh, Pa.; Kunkle Valve Co., Fort Wayne, Ind.

Lamb Piston Sales Co., Torrance, Calif.: Landis Machine Co., Waynesboro, Pa.; Larkin Packer Co., St. Louis, Mo.; Layne & Bowler Co., Houston, Tex.; Leschen & Sons Rope Co., A., St. Louis, Mo.: Lincoln Electric Co., Cleveland, Ohio; Link-Belt Co., Chicago; *Lufkin Foundry & Machine Co., Lufkin, Tex.; Lunkenheimer Co., Cincinnati, Ohio.

M & H Valve & Fitting Co., Anniston, Ala.: *Maintenance Engineering Corp., Houston, Tex.: Mair Machinery Co., D. S., Houston, Tex.; Martin-Decker Corp., Long Beach, Calif.; Mepham Corp., Geo. S., East St. Louis, Ill.; Merco Centrifugal Separator Co., Ltd., San Francisco, Calif.; Merco Nordstrom Valve Co., Pittsburgh, Pa.; Meriam Co., Cleveland, Ohio; Mid-Continent Supply Co., Fort Worth, Tex.; Mine Safety Appliances Co., Pittsburgh, Pa.; Mission Manufacturing Co., Houston, Tex.

*National Supply Co., Toledo, Ohio; National Tube Co., Pittsburgh, Pa.; Norvell-Wilder Supply Co., Beaumont, Tex.

Oakite Products, Inc., New York; Oil and Gas Journal, The, Tulsa: Oil Center Tool Co., Inc., Houston, Tex.: Oil Well Supply Co., Dallas, Tex.; O'Leary King Co., Houston, Tex.; Olympic Engineering Co., Los Angeles, Calif.; Osage Metal Co., Oklahoma City, Okla.: Oster Manufacturing Co., Cleveland, Ohio.

P & D Specialty Manufacturing Co., Houston, Tex.: Petroleum Electric Power Club, Houston, Tex.: Petroleum Engineer, Dallas, Tex.: Pittsburgh Equitable Meter Co., Pittsburgh, Pa.; *Portable Rig Co., Houston, Tex.; Powell Co., Wm., Cincinnati, Ohio; Precision Scientific Co., Chicago; Production Equipment Co., Beaumont, Tex.; Pyrene Manufacturing Co., Newark, N. J.

Rector Well Equipment Co., Fort Worth, Tex.; Red Rex Corp., Houston, Tex.; Reed Roller Bit Co., Houston, Tex.; Regan Forge & Engineering Co., Houston, Tex.; Republic Steel Corp., Cleveland, Ohio.

Safety Equipment Service Co., Cleveland, Ohio; Service Pattern & Model Works, Houston, Tex.; Shaffer Tool Works, Brea, Calif.; Smith Supply Co., Nowery J., Houston, Tex.; Southern Engine & Pump Co., Houston, Tex.; Spang, Chalfant & Co., Inc., Houston, Tex.: Spencer Lens Co., Buffalo, N. Y.: Sperry-Sun Well Surveying Co., Philadelphia, Pa.; Strong, Carlisle & Hammond Co., Cleveland, Ohio.

Tagliabue Manufacturing Co., C. J., Brooklyn, N. Y.; Templeton, Kenly & Co., Ltd., Chicago; Texacone Co., Dallas, Tex.: Texas Electric Steel Casting Co., Houston, Tex.; Texas Rubber & Specialty Corp., Houston, Tex.: Texas Steel Co., Fort Worth, Tex.; Thornhill-Craver Co., Houston, Tex.; Timkin Roller Bearing Co., Canton, Ohio; Tobin Aerial Surveys, Edgar, San Antonio, Tex.; Tretolite Corp., Ltd., Dallas, Tex.; Turbolite, Inc., Houston, Tex.: Twin Disc Clutch Co., Racine, Wis.: Twin Seat Valve Co., Beaumont, Tex.

United American Bosch Corp., Springfield, Mass.: United States Gauge Co., New York; U. S. Steel Corp., Pittsburgh, Pa.; Universal Engineering Co., Ltd., Los Angeles, Calif.

Vernon Tool Co., Ltd., Los Angeles, Calif.; Victor Welding Equipment Co., San Francisco, Calif.; Vortox Manufacturing Co., Claremont, Calif.

W-K-M Co., Inc., Houston, Tex.; Walworth Co., South Boston, Mass.; Western Block Co., Lockport, N. Y.: Western Sand-Banum Co., Inc., Houston, Tex.; *Wickwire Spencer Steel Co., New York; Williams & Co., J. H., New York; Williams Valve Co., D. T., Cincinnati, Ohio; Williamsport Wire Rope Co., Williamsport, Pa.; Wilson Supply Co., Houston, Tex.: Wilson, Webb, Huntington Park, Calif. Zinc Co., John (Burners), Tulsa.

*Concerns that have reserved space—awaiting contracts.

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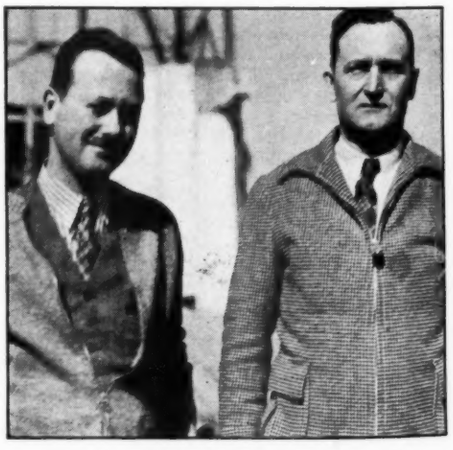

Kenneth R. Teis, chief engineer and superintendent of operations, and E. W. Burns, assistant superintendent of operations, for E. H. Moore, Inc., had been watching the drilling of the company's No. 11 Akers in the Fitts field, in Oklahoma, when the photographer came along and pushed the button on them

The J & S Gas Mixing Valve

Made in all S.A.E. standard flange sizes. Also many special adaptors are available for use in conjunction with gasoline carburetor furnished with engine permitting the use of either gas or gasoline.

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Tulsa, Okla., 425 Petroleum Building
Houston, Texas, 3118 Blodgett Avenue
Long Beach, Calif., 549 East Bixby Road,
(3800 Block—Atlantic Ave.)

Naval Reserve Lease Brings $45,000 Bonus; Top Price

Oil operators paid a total bonus of $325,750 for leases on 163 tracts of Osage Indian lands at the public auction in Pawhuska, Okla., March 10. The leases covered 25,575.74 acres. The average price an acre paid by oil men was $12.73.

Several tracts in the Naval Reserve and South Burbank districts were sold only after spirited bidding by several operators. The Lewis Production Co. and The Texas Co., bidding jointly, topped the sale with a bid of $45,000 for the SE quarter of section 33-24-7, south of the Naval Reserve pool. This was at the rate of $281.25 an acre.

The second highest bid was by Continental Oil Co., for the NE quarter of section 27-24-7, on the east side of Naval Reserve production. It paid total bonus of $27,000 for the tract, an average of $168.75 an acre.

The Champlin Refining Co. paid the highest price for a tract in the South Burbank area. This was the NE quarter of section 27-25-6, sold for a bonus of $12,000. Several other tracts southeast of the South Burbank area also commanded good prices.

Tract No.	Description	Acres, more or less	Buyer and address—	Price
1	SW 17-20-12	160	George D. Foster, Tulsa	$ 200
4	NW 5-22-12	160	Link Oil Co., Tulsa	200
5	SW 5-22-12	160	Link Oil Co., Tulsa	200
6	NW 7-22-12	160	Edward Harrop, Sedan, Kan.	325
7	SW 7-22-12	160	A. Z. Markas, Tulsa	500
8	NE 9-22-12	160	Link Oil Co., Tulsa	200
9	NW 9-22-12	160	Link Oil Co., Tulsa	200
10	NE 18-22-12	160	Edward Harrop, Sedan, Kan.	550
11	SE 18-22-12	160	J. G. Neely, Tulsa	200
13	SE 20-22-12	160	Ray Branstetter, Skiatook	200
14	SW 20-22-12	160	Ray Branstetter, Skiatook	200
15	SW 3-23-12	160	Royal Oil & Gas Co., Tulsa	200
16	SE 4-23-12	160	W. C. McBride, Inc., Tulsa	300
17	SE 21-23-12	160	W. C. McBride, Inc., Tulsa	200
18	SW 21-23-12	160	W. C. McBride, Inc., Tulsa	200
19	SW 27-23-12	160	C. E. Hane, Tulsa	300
20	NW 33-23-12	160	A. Pepis, Tulsa	200
21	NW 34-23-12	160	C. E. Hane, Tulsa	200
22	SW 34-23-12	160	C. E. Hane, Tulsa	200
23	NE 8-24-12	160	W. C. McBride, Inc., Tulsa	200
28	SW 16-25-12	160	45 Oil Co., Tulsa	200
29	NW 21-25-12	160	Royal Oil & Gas Co., Tulsa	200
30	NW 30-25-12	160	Leo Ludlow, Tulsa	425
31	SW 30-25-12	160	J. H. Alexander, Tulsa	650
32	SE 6-26-12	160	W. C. McBride, Inc., Tulsa	200
33	SW 8-26-12	160	R. D. Stone, California	200
34	SE 7-27-12	160	Western Am. Oil Co., Bartlesville	200
35	NE 18-27-12	160	Western Am. Oil Co., Bartlesville	500
47	NW 28-22-11	160	Levi Moore, Boswell, Ind.	325
48	SE 29-22-11	160	Ray Branstetter, Skiatook	300
49	NE 32-22-11	160	Ray Branstetter, Skiatook	900
50	NW 6-23-11	160	E. L. Bagby, Enid	200
51	E½ SW 12-23-11	80	T. O. Lillystrand, Tulsa	425
53	NE 18-23-11	160	C. T. Matthews, Tulsa	200
56	SW 20-23-11	160	Opal Twyman, Tulsa	200
58	NE 25-23-11	160	J. E. Cooper, Tulsa	200
67	SW 15-29-11	160	Winona Oil Corp., Tulsa	200
71	Fr. SW 34-20-10	97.80	George D. Foster, Tulsa	125
74	NE 18-22-10	160	Mid-Co. Oil Corp., Tulsa	200
75	NW 18-22-10	160	Mid-Co. Oil Corp., Tulsa	200
78	SE 9-23-10	160	W. C. McBride, Inc., Tulsa	1,600
79	SW 9-23-10	160	W. C. McBride, Inc., Tulsa	700
80	NE 10-23-10	160	W. C. McBride, Inc., Tulsa	1,200
81	NW 10-23-10	160	W. C. McBride, Inc., Tulsa	1,000
82	SE 10-23-10	160	W. C. McBride, Inc., Tulsa	1,100
83	SW 10-23-10	160	W. C. McBride, Inc., Tulsa	2,300
84	NE 16-23-10	160	W. C. McBride, Inc., Tulsa	1,200
85	NW 16-23-10	160	W. C. McBride, Inc., Tulsa	2,600
86	SW 17-23-10	160	W. C. McBride, Inc., Tulsa	350
88	NW 20-23-10	160	Osage Lease Holding Co.	200
89	SW 20-23-10	160	Mid-Co. Oil Corp., Tulsa	1,100
95	SW 5-24-10	160	Mid-Co. Oil Corp., Tulsa	1,700
96	SE 6-24-10	160	R. L. Martin, Tulsa	200
107	NW 23-27-10	160	H. E. Wesson, Tulsa	200
108	SW 23-27-10	160	H. E. Wesson, Tulsa	200
114	NW 3-20- 9	160	Norbla Oil Corp., Tulsa	200
115	Fr. SW 3-20- 9	144.33	Royal Oil & Gas Co., Tulsa	100
117	Fr. SE 4-20- 9	55.31	Sand Springs Home	200
120	SE 8-21- 9	160	Smith-Leahy, and others, Tulsa	200
121	SE 17-21- 9	160	W. C. Elliot, Tulsa	200
122	NE 18-21- 9	160	Johnson O. & R. Co., Cleveland	200
123	NW 18-21- 9	160	Johnson O. & R. Co., Cleveland	200
125	NE 28-21- 9	160	Charles Gray	200
126	NW 28-21- 9	160	R. D. Stone, California	900
127	NE 28-22- 9	160	Fred Tillman, L. O. Link, Tulsa	200
128	NW 28-22- 9	160	Skelly Oil Co., Tulsa	500
132	SW 11-23- 9	160	W. H. Aaron, Pawhuska	200
133	NW 16-23- 9	160	Turman Oil Co., Tulsa	200
134	SW 16-23- 9	160	Bay Oil Corp., Tulsa	200
136	SW 26-23- 9	160	W. O. Allen, Tulsa	200
137	NE 35-23- 9	160	W. O. Allen, Tulsa	200
138	NW 35-23- 9	160	W. O. Allen, Tulsa	200
139	SE 6-24- 9	160	Norbla Oil Co., Tulsa	650
140	NE 7-24- 9	160	I.T.I.O., Bartlesville	800
146	SW 10-25- 9	160	Bay Oil Corp., Tulsa	200
160	SE 36-27- 9	160	W. H. Aaron, Pawhuska	350
161	NE 4-28- 9	160	Wah-Sha-She Oil Co., Bartlesville	200
162	NW 4-28- 9	160	Wah-Sha-She Oil Co., Bartlesville	200
163	SE 4-28- 9	160	Wah-Sha-She Oil Co., Bartlesville	300
164	SW 4-28- 9	160	Wah-Sha-She Oil Co., Bartlesville	200
165	SE 3-21- 8	160	Johnson O. & R. Co., Cleveland	400
166	SW 3-21- 8	160	R. D. Simon & Bros., Tulsa	200
167	NE 10-21- 8	160	Johnson O. & R. Co., Cleveland	200
168	Fr. NW 10-21- 8	117.40	R. D. Stone, California	350
169	NW 23-22- 8	160	Roy Branstetter, Skiatook	500
173	NE 2-24- 8	160	E. L. Bagby, Enid	200
184	SE 11-22- 7	160	Skelly Oil Co., Tulsa	350
185	NW 12-22- 7	160	J. R. Higgins, Tulsa	200
186	SW 12-22- 7	160	Skelly Oil Co., Tulsa	1,700
187	NW 13-22- 7	160	The Texas Co., Tulsa	1,800
188	Fr. NE 14-22- 7	121.00	The Texas Co., Tulsa	1,100
189	NE 34-22- 7	160	Devonian Oil Co., Bartlesville	800
190	NW 34-22- 7	160	Bay Oil Co., Tulsa	200
191	SE 34-22- 7	160	Devonian Oil Co., Bartlesville	2,900
192	SW 34-22- 7	160	Foster Oil Co., Tulsa	1,200
193	NW 3-23- 7	160	Phillips Pet., Bartlesville	1,750
194	NE 4-23- 7	160	Shell Pet., Tulsa	1,300
195	SW 9-23- 7	160	The Texas Co., Tulsa	3,300
196	NW 16-23- 7	160	The Texas Co., Tulsa	3,400
197	NW 18-23- 7	160	The Texas Co., Tulsa	1,000
198	SW 18-23- 7	160	Peters Petroleum, Tulsa	700
199	SW 4-24- 7	160	Lewis Production Co., Tulsa	3,700
200	NE 8-24- 7	160	Continental Oil Co., Ponca City	4,200
204	NW 20-24- 7	160	Lewis Production Co., Tulsa	2,100
205	NW 23-24- 7	160	The Texas Co., Tulsa	3,000
206	SW 23-24- 7	160	The Texas Co., Tulsa	6,100
207	SW 26-24- 7	160	Tide Water Assoc. Oil Co., Tulsa	10,000
208	NE 27-24- 7	160	Continental Oil Co., Ponca City	27,000
209	SE 33-24- 7	160	Lewis Prod. Co., and Texas, Tulsa	45,000
210	SW 33-24- 7	160	Lewis Prod. Co., and Texas, Tulsa	5,000
211	NE 35-24- 7	160	Bay Oil Corp., Tulsa	2,000
212	NW 35-24- 7	160	Bay Oil Corp., Tulsa	18,500
213	SE 35-24- 7	160	Bay Oil Corp., Tulsa	1,700
214	SW 35-24- 7	160	Bay Oil Corp., Tulsa	2,500
218	SE 4-25- 7	160	Skelly Oil Co., Tulsa	400
219	SW 4-25- 7	160	Skelly Oil Co., Tulsa	200
220	SW 21-25- 7	160	Gulf Oil Corp., Tulsa	600
221	NW 28-25- 7	160	Skelly Oil Co., Tulsa	600
222	NE 29-25- 7	160	Skelly Oil Co., Tulsa	1,700
223	NE 32-25- 7	160	Stanolind Oil & Gas, Tulsa	550
224	NW 32-25- 7	160	Norbla Oil Co., Tulsa	200
225	NW 2-26- 7	160	C. H. Westfall, Ponca City	3,200
226	SW 2-26- 7	160	C. H. Westfall, Ponca City	200
231	SW 1-27- 7	160	The Texas Co., Tulsa	11,000
234	SW 35-27- 7	160	Mid-Con. Oil Co., Tulsa	1,500
243	NE 14-23- 6	160	Continental Oil Co., Ponca City	2,000
244	NW 14-23- 6	160	Phillips Petroleum, Bartlesville	2,000
245	SE 14-23- 6	160	The Texas Co., Tulsa	2,700
246	SW 14-23- 6	160	Phillips Pet. Corp., Bartlesville	1,500
247	NE 16-23- 6	160	Mid-Co. Oil Co., Tulsa	1,700
248	NW 16-23- 6	160	Carter Oil Co., Tulsa	1,700
249	SE 16-23- 6	160	Phillips Pet. Corp., Bartlesville	1,700
250	SW 16-23- 6	160	Carter Oil Co., Tulsa	1,700
251	NW 3-24- 6	160	Carter Oil Co., Tulsa	3,600
252	NE 4-24- 6	160	Carter Oil Co., Tulsa	4,000
253	NE 6-24- 6	160	Carter Oil Co., Tulsa	1,800
254	NW 6-24- 6	160	Carter Oil Co., Tulsa	1,300
255	SE 6-24- 6	160	Carter Oil Co., Tulsa	1,300
256	SW 6-24- 6	160	Carter Oil Co., Tulsa	1,200
261	SW 21-24- 6	160	Stanolind Oil & Gas Co., Tulsa	1,700
262	SE 28-24- 6	160	I.T.I.O., Bartlesville	1,900
263	SE 33-24- 6	160	Stanolind Oil & Gas Co., Tulsa	2,100
264	NW 12-25- 6	160	Norbla Oil Co., Tulsa	200
265	SW 14-25- 6	160	Champlin Refining Co., Enid	1,100
268	NW 23-25- 6	160	Champlin Refining Co., Enid	1,900
269	SW 23-25- 6	160	Carter Oil Co., Tulsa	3,600
270	NE 27-25- 6	160	Champlin Refining Co., Enid	12,000
271	SE 33-25- 6	160	Carter Oil Co., Tulsa	3,200
272	SW 33-25- 6	160	I.T.I.O., Bartlesville	2,200
273	SW 34-25- 6	160	Carter Oil Co., Tulsa	5,700
274	SW 7-26- 6	160	Kewanee Oil & Gas Co., Tulsa	1,800
275	NE 18-26- 6	160	Kewanee Oil & Gas Co., Tulsa	3,000
276	NW 18-26- 6	160	Kewanee Oil & Gas Co., Tulsa	1,800
277	NE 7-27- 6	160	Phillips Pet. Co., Bartlesville	200
278	SE 11-24- 5	160	Carter Oil Co., Tulsa	200
279	SW 12-24- 5	160	Carter Oil Co., Tulsa	300
280	NW 13-24- 5	160	Carter Oil Co., Tulsa	2,400
281	NE 14-24- 5	160	Carter Oil Co., Tulsa	1,700
286	NE 32-27- 5	160	I.T.I.O., Bartlesville	300
287	SE 32-27- 5	160	Peters Petroleum, Tulsa	300
288	SE 13-26- 4	160	W. A. Snyder Drilling Co., Tulsa	1,100
289	NE 24-26- 4	160	Foster Minerals Corp., Bartlesville	1,600
			Total bonus	$325,750

CALIFORNIA FIELD OPERATIONS, DECEMBER, 1936

	Total production	Daily average		
Group No. 1:	December	Dec., 1936	Nov., 1936	Dec., 1935
Belridge—North	438,701	14,152	13,533	10,336
Belridge—South	57,369	1,850	1,869	2,385
Coalinga	478,718	15,442	15,732	20,744
Edison	165,673	5,344	5,683	5,239
Elk Hills	260,637	8,408	8,270	9,714
Fruitvale	268,268	8,654	8,941	6,715
*Greeley	3,960	128	.....	.....
Kern River	455,462	14,692	14,525	14,564
Kettleman Middle Dome	7,277	235	268	233
Kettleman North Dome	2,407,476	77,660	77,607	105,310
Lost Hills	114,866	3,705	3,613	5,086
McKittrick	54,217	1,749	1,764	4,110
Midway-Sunset	2,060,194	66,458	61,979	60,788
Mountain View	643,620	20,762	21,999	35,507
Mount Poso	555,107	17,907	18,022	21,405
Round Mountain	355,631	11,472	11,551	8,490
Ten Section	32,056	1,034	1,181	.....
Wheeler Ridge	10,289	332	343	404
Group No. 2:				
Capitan	57,640	1,859	1,796	1,802
Elwood	324,850	10,479	11,666	16,038
Rincon	68,708	2,216	2,123	1,922
San Miguelito	66,494	2,145	2,214	1,353
Santa Barbara	23,694	764	906	2,084
Santa Maria	165,161	5,328	5,325	3,893
Summerland	1,068	35	36	29
Ventura Avenue	1,067,243	34,427	34,309	39,340
Ventura-Newhall	155,912	5,030	4,988	4,313
Watsonville	1,860	60	60	60
Group No. 3:				
Brea-Olinda	250,016	8,065	8,050	9,819
Coyote—East	87,863	2,834	2,852	2,674
Coyote—West	249,079	8,035	7,847	10,279
Dominguez	771,763	24,896	25,317	29,350
El Segundo	65,119	2,100	377	.....
Huntington Beach	1,096,253	35,331	35,102	42,540
Inglewood	407,084	13,132	12,476	14,859
Lawndale	2,837	91	105	263
Long Beach	1,971,466	63,596	65,416	79,381
Los Angeles-Salt Lake	24,732	798	817	834
Montebello	274,509	8,855	9,110	7,513
Playa Del Rey	321,840	10,382	10,986	15,135
Potrero	9,199	297	290	336
Richfield	223,503	7,210	7,096	7,464
Rosecrans	68,256	2,202	2,231	2,650
Santa Fe Springs	1,375,953	44,386	45,186	54,360
Seal Beach	269,326	8,688	8,759	11,219
Torrance	300,747	9,701	8,827	6,658
Whittier	28,195	909	930	1,096
Total	18,098,891	583,835	582,077	678,284
Total November	17,462,315	582,077		
Increase	636,576	1,758		

*Situated in Kern County, approximately 6 miles east of Rio Bravo and 12 miles west of Bakersfield.

GULF COAST WATER SHIPMENTS — DECEMBER, 1936

HOUSTON-TEXAS CITY DISTRICT

Company and terminal—	Crude— Coastwise	Crude— Export	Refined— Coastwise	Refined— Export	Total
American Liberty Pipe Line Co.:					
Norsworthy	79,324	76,619	.....	.....	155,943
Atlantic Pipe Line Co.:					
Texas City	297,231	.....	5,402	.....	302,633
Humble Oil & Ref. Co.:					
Baytown	515,473	.....	3,166,443	602,656	4,284,572
Texas City	643,123	.....	.....	.....	643,123
Independent Terminal Co.:					
Texas City	.....	.....	279,142	.....	279,142
Pan American Pet. & Trans. Co.:					
Texas City	.....	.....	981,484	.....	981,484
Republic Oil Ref. Co.:					
Texas City	.....	.....	351,496	.....	351,496
Shell Pet. Corp.:					
Houston	214,542	.....	1,669,372	234,440	2,118,354
Sinclair Ref. Co.:					
Houston	1,369,196	110,751	.....	.....	1,479,947
Sun Oil Co.:					
Norsworthy	212,382	.....	.....	.....	212,382
Texas Co.:					
Houston	703,981	68,256	.....	.....	772,237
Miscellaneous	.....	.....	1,610,650	339,156	1,949,806
Total	4,035,252	255,626	8,063,989	1,176,252	13,531,119

SABINE DISTRICT

Atlantic Pipe Line Co.:					
Atreco	1,668,170	.....	.....	.....	1,668,170
Gulf Oil Corp.:					
Port Arthur	464,216	.....	3,142,777	157,558	3,764,551
Magnolia Pet. Co.:					
Beaumont	942,581	27,680	2,904,186	.....	3,874,447
Lockport	74,960	.....	.....	.....	74,960
Pure Oil Co.:					
Smiths Bluff	451,304	.....	791,377	.....	1,242,681
Shell Pet. Corp.:					
Haymark	158,221	.....	.....	.....	158,221
Stanolind Oil & Gas Co.:					
Beaumont	289,857	264,851	.....	.....	554,708
Sun Oil Co.:					
Beaumont	1,766,152	158,622	.....	.....	1,924,774
Texas Co.:					
Port Arthur	1,454,534	331,247	2,790,666	837,815	5,414,262
Union Sulphur Co.:					
Lockport	385,250	.....	.....	.....	385,250
Total	7,655,245	782,400	9,629,006	995,373	19,062,024

CORPUS CHRISTI DISTRICT

Atlantic Pipe Line Co.:					
Harbor Island	705,721	67,831	.....	.....	773,552
General American Tank Storage & Terminal Co.:					
Corpus Christi	166,919	202,755	197,687	11,677	579,038
Humble Oil & Ref. Co.:					
Harbor Island	2,471,964	.....	.....	.....	2,471,964
Ingleside	29,443	.....	.....	.....	29,443
Texas Co.:					
Corpus Christi	147,314	151,976	.....	.....	299,290
Miscellaneous	1,073,562	75,588	1,354,114	.....	2,503,264
Total	4,594,923	498,150	1,551,801	11,677	6,656,551

MISSISSIPPI DISTRICT

Texas Co.:					
Amesville	150,047	.....	.....	.....	150,047
Tide Water Oil Co.:					
Westwego	85,343	.....	.....	.....	85,343
Shell Pet. Corp.:					
Norco	.....	.....	657,178	.....	657,178
Standard Oil (La.):					
Baton Rouge	218,133	.....	1,330,290	449,486	1,997,909
Total	453,523	.....	1,987,468	449,486	2,890,477
District totals:					
Houston district	4,035,252	255,626	8,063,989	1,176,252	13,531,119
Sabine district	7,655,245	782,400	9,629,006	995,373	19,062,024
Corpus Christi district	4,594,923	498,150	1,551,801	11,677	6,656,551
Mississippi district	453,523	.....	1,987,468	449,486	2,890,477
Total	16,738,943	1,536,176	21,232,264	2,632,788	42,140,171

CALIFORNIA OIL FIELD DEVELOPMENT

	New rigs up	Active drilling	Producers completed	Daily initial output	Active producing	Abandoned— Drillers	Abandoned— Producers
Group No. 1:							
Beiridge—North	1	3	1	1,872	40	...	...
Beiridge—South	...	...	...	.....	156	...	...
Coalinga	...	4	...	.....	821	...	5
Edison	...	3	...	.....	89	...	...
Elk Hills	...	...	...	.....	151	...	...
Fruitvale	3	6	4	555	128	...	...
Greeley	...	..	1	2,657	1	...	...
Kern River	5	11	9	1,182	1,300	...	...
Kettleman Middle Dome	...	1	...	.....	3	..	...
Kettleman North Dome	2	15	2	7,440	122	...	...
Lost Hills	1	1	1	390	271	..	...
McKittrick	...	4	...	.....	126	...	...
Midway-Sunset	14	16	13	2,353	2,313	2	..
Mountain View	3	7	5	3,005	172	...	1
Mount Poso	2	7	3	809	235	.	2
Round Mountain	2	2	1	250	113	3	...
Ten Section	1	4	...	.....	2	1	...
Wheeler Ridge	...	...	...	.....	26	...	...
Group No. 2:							
Capitan	...	1	...	.....	25	...	...
Elwood	...	...	...	.....	78	...	...
Rincon	...	1	...	.....	29	...	...
San Miguelito	...	2	...	.....	9	...	...
Santa Barbara	.	...	...	.....	56	..	2
Santa Maria	6	16	3	6,664	198	...	...
Summerland	...	...	...	.....	19	...	...
Ventura Avenue	1	5	...	.....	245	...	...
Ventura-Newhall	...	13	1	436	567	1	...
Watsonville	...	...	...	.....	7	...	...
Group No. 3:							
Brea-Olinda	...	...	1	42	360	.	1
Coyote—East	2	4	...	.....	77	..	...
Coyote—West	1	...	...	.....	48	...	...
Domingues	5	4	2	3,292	130	...	...
El Segundo	7	5	1	2,420	4	...	...
Huntington Beach	2	14	3	821	521	...	...
Inglewood	...	...	1	1,418	201	1	...
Lawndale	...	...	..	.....	6	...	...
Long Beach	...	1	...	.....	1,242	...	5
Los Angeles-Salt Lake	...	...	..	.....	122	...	1
Montebello	...	2	1	48	196	3	...
Newport	...	1	..	.....	.....	...	...
Playa Del Rey	1	3	...	.....	212	2	3
Potrero	...	...	...	.....	10	...	..
Richfield	2	7	2	181	260	...	...
Rosecrans	...	...	...	.....	77	...	...
Santa Fe Springs	...	3	...	.....	633	...	3
Seal Beach	...	...	...	.....	101	...	...
Torrance	5	7	5	2,332	533	...	...
Whittier	...	...	..	.....	158	...	...
Miscellaneous drilling	7	58	...	.....	.....	11	...
Group No. 4—Gas fields:							
Buena Vista Lake	..	...	...	.....	5	..	...
Buttonwillow	...	...	..	.....	22	..	...
Chowchilla	...	...	..	.....	.....	...	...
Delano	...	...	...	.....	.....	...	...
Dudley Ridge	...	...	...	.....	.....	...	...
Goleta	...	...	...	.....	3	...	...
McDonald Island	1	...	...	.....	.....	1	...
Rio Vista	1	2	...	.....	1	...	...
Semi-Tropic	...	...	...	.....	.....	...	...
Tracy	...	...	...	.....	6	...	...
Total December	75	227	61	38,167	12,230	25	23
Total November	93	248	71	24,950	12,227	28	20
Decrease	18	21	10	*13,217	*3	3	*3
Average for 1936	91	234	67	31,167	12,191	27	17
Average for 1935	86	243	64	55,082	12,136	29	17
Average for 1934	53	196	38	47,553	11,053	21	17

*Increase.

Central West Fields

(Continued from Page 96)

41,000 feet of gas per day after being shot with 15 quarts. In section 8, same township, Heisler Oil & Gas Co. is rigged up for a test on the Grace Mallett farm. In section 5, Adams Township, Stout & Shafer are rigged up for No. 4 on the C. Keevert lease.

In the same county, section 5, Bethel Township, Newhart & Burkhart No. 3 Sophia Laughry was completed as a small gas well at a depth of 2,019 feet. This well made 15,000 feet of gas in the first Salt sand at 1,050-60 feet, small amount of gas in the Lime sand at 1,385-95 feet, and some gas in the Berea sand at 2,012-16 feet, making a total gauge of 28,-992 feet. In section 6, same township, F. O. Parks is rigged up for No. 3 on the Pearl Parks farm.

Charles Dennis No. 1 George F. Miller, in section 5, Newport Township, Washington County, was completed below the Berea sand at 1,706-14 feet and is making 6 bbls. of oil and 10,000 feet of gas per day after a shot of 25 quarts. In section 3, Ludlow Township, Lerrick & Burns No. 2 Harvey Mosser was drilled through the Berea sand at 2,010-20 feet without a show of oil, gas or water and has been abandoned. In section 1, Liberty Township, William Depuy No. 1 George Heldman gauged 3,000 feet of gas in the Berea sand at 1,930-35 feet and will probably be abandoned. In Lot 25, Muskingum Township, John Wagner & Co. are rigged up for No. 4 on the Milton Schramm farm.

In the same county, section 13, Warren Township, McVey Oil & Gas Co. No. 1 John Arnold was drilled through the Injun sand at 1,537-65 feet and made a very good showing of gas and will be shot. In section 29, Wesley Township, C. K. Farrett No. 6 A. A. Goddard made a good showing of oil in the first Cow Run sand at 608-27 feet and is being cleaned out after a shot. In section 34, Grandview Township, Hall and Hanlon & Co. are moving a machine on location for the second test on the Mary Moore lease.

In Meigs County, section 3, Rutland Township, Ohio Fuel Gas Co. No. 1 Bart Romine was drilled through the second Berea sand at 1,727-39 feet, where it made a fair showing of gas naturally. In section 21, same township, Roberts & Co. No. 3 Jennie Jacks was drilled through the Salt and Maxon sands at 710-896 feet into the Keener sand at 910-28 feet, where the hole filled with water. The hole was plugged back to the Salt sand at 805 feet, where 100,-000 feet of gas was saved. In section 3, Smith Oil Co. is drilling the second test on the Jasper Miller lease.

In section 31, Lebanon Township, same county, Roy Holmes & Co. No. 2 Schuyler Bush was completed below the first Berea sand at 1,972-78 feet, and gauged 300,000 feet of gas after a shot.

California Fields

(Continued from Page 90)

15.6 gravity oil daily from 1,506 feet.

In the Mountain View field, Mohawk Oil Co. recompleted No. 3 Hood, doing 404 bbls. of 28.5 gravity oil per day after the hole was plugged back from 8,689 feet to 6,015 feet. After several months of effort the Texas Co. has completed No. 1 Theta in the Lost Hills field of Kern County, pumping 197 bbls. of 13.8 gravity oil per day from 2,037 feet after the hole had been redrilled to 1,908 feet and finished with a 6⅝-inch liner carying 53 feet of perforated.

Los Angeles Basin

In the Richfield district of Los Angeles Basin Standard Oil Co. completed No. 2-24 Kraemer pumping 121 bbls. of 23.4 gravity oil per day from 4,550 feet, plugged back from 4,580 feet because of bottom water.

In the Torrance field Weber-Butler Oil Co. completed No. 1 Gilman, pumping 140 bbls. of 18.3 gravity oil daily from 3,873 feet. At Huntington Beach Wilshire Oil Co. recompleted No. 17 H. B., pumping 298 bbls. of relatively clean 24.1 gravity oil daily from 4,590 feet after the hole had been straightened and finished within the confines of the lease. In the Inglewood field, Shell Oil Co. recompleted No. 4 Rubel pumping 167 bbls. of 22.7 gravity oil per day after redrilling and deepening to 2,640 feet.

Graham & Loftus Oil Co. completed No. 1 Perkins in the East Coyote field, making 124 bbls. of 24.5 gravity oil per day after the hole had been cleaned out to bottom, 4,326 feet.

Summary of Operations, All Fields, February

SUMMARY OF ALL FIELDS

Wells Completed

	Comp.	Prod.	Dry	Gas
Penna. Grade fields..	390	733	26	73
Lima	4	7	1	0
Central Ohio	62	260	21	32
Indiana	7	45	3	2
Kentucky	6	335	1	0
Michigan	51	9,664	20	11
Mississippi	3	0	3	0
Kansas	148	87,474	42	2
Oklahoma	180	53,676	45	17
North Cent. Texas	206	16,117	99	3
West Texas	180	133,823	19	2
Texas Panhandle	47	18,325	0	12
East Texas	141	6,805	3	0
East Central Texas	37	3,016	4	0
E. Texas border counties	31	15,294	1	2
Gulf Coast, Texas	92	28,109	21	2
Southwest Texas	181	24,020	47	10
Gulf Coast, Louisiana	23	5,355	6	1
North Louisiana	22	2,279	9	4
Arkansas	10	436	7	0
Montana	4	200	2	0
Wyoming	9	4,412	3	0
Colorado	2	840	1	0
New Mexico	34	44,075	6	2
Nebraska	1	0	1	0
Total Feb.	1,871	455,294	391	175
Total Jan.	2,130	477,590	444	181
Difference	259	22,296	53	6

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Penna. Grade fields	80	382	462
Lima	4	29	33
Central Ohio	43	145	188
Indiana	5	34	39
Kentucky	12	44	56
Illinois	2	12	14
Michigan	67	123	190
Florida	0	4	4
Alabama	0	2	2
Mississippi	5	9	14
Kansas	78	333	411
Oklahoma	57	481	538
North Cent. Texas	59	203	262
West Texas	83	379	462
Texas Panhandle	47	125	172
East Texas	56	70	126
East Central Texas	22	83	105
E. Texas border counties	11	66	77
Gulf Coast, Texas	39	121	160
Southwest Texas	69	175	244
Gulf Coast, Louisiana	18	90	108
North Louisiana	22	88	110
Arkansas	12	34	46
Montana	4	48	52
Wyoming	1	46	47
Colorado	2	28	30
New Mexico	6	89	95
Utah	1	7	8
Total Feb.	815	3,240	4,055
Total Jan.	844	3,174	4,018
Difference	29	66	37

OKLAHOMA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Atoka	0	0	0	0	0	1	1
Beckham	1	0	1	0	0	2	2
Caddo	1	0	0	1	0	5	5
Carter	8	343	1	0	2	10	12
Choctaw	0	0	0	0	0	1	1
Cleveland	3	10,984	0	0	1	9	10
Coal	6	69	4	1	0	1	1
Comanche	0	0	0	0	0	8	8
Cotton	1	0	1	0	0	3	3
Creek	8	397	0	2	11	46	57
Garfield	0	0	0	0	0	1	1
Garvin	7	571	1	0	2	7	9
Grady	1	50	0	0	0	1	1
Grant	0	0	0	0	0	1	1
Greer	1	0	1	0	0	0	0
Harmon	0	0	0	0	0	1	1
Hughes	4	377	1	2	0	9	9
Jackson	2	0	1	1	1	4	5
Jefferson	1	25	0	0	1	5	6
Johnston	0	0	0	0	0	1	1
Kay	1	0	1	0	1	4	5
Kiowa	4	0	3	1	0	3	3
Latimer	0	0	0	0	0	1	1
LeFlore	0	0	0	0	0	1	1
Lincoln	3	230	1	0	1	5	6
Logan	3	2,079	1	0	2	16	18
Love	0	0	0	0	0	3	3
Marshall	4	0	4	0	0	3	3
McIntosh	0	0	0	0	0	1	1
Murray	0	0	0	0	0	2	2
Muskogee	1	5	0	0	2	10	12
Noble	2	1,229	0	0	2	5	7
Okfuskee	21	4,395	3	0	8	25	33
Oklahoma	7	4,420	1	0	1	36	37
Okmulgee	8	18	3	3	1	27	28
Osage	7	530	1	2	1	29	30
Pawnee	3	2	2	0	1	1	2
Payne	2	0	2	0	0	0	0
Pittsburg	1	0	0	1	0	1	1
Pontotoc	42	23,443	1	1	7	87	94
Pottawatomie	6	299	2	0	1	15	16
Pushmataha	0	0	0	0	0	1	1
Seminole	13	4,163	5	0	7	48	55
Stephens	4	47	1	1	1	12	13
Tillman	0	0	0	0	0	4	4
Texas	1	0	0	1	0	0	0
Tulsa	3	0	3	0	2	17	19
Wagoner	0	0	0	0	1	7	8
Washita	0	0	0	0	0	1	1
Ttl. Feb.	180	53,676	45	17	57	481	538
Ttl. Jan.	164	60,599	39	6	63	442	505
Difference	16	6,923	6	11	6	39	33

KANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Barber	0	0	0	0	0	2	2
Barton	18	16,423	5	0	6	31	37
Butler	4	64	2	0	1	7	8
Chase	0	0	0	0	0	2	2
Chautauqua	2	0	1	1	1	5	6
Clark	0	0	0	0	0	1	1
Coffey	1	0	1	0	1	4	5
Cowley	6	385	4	0	0	11	11
Decatur	0	0	0	0	0	1	1
Edwards	1	0	1	0	0	0	0
Elk	1	50	0	0	1	1	2
Ellis	7	6,903	2	0	4	18	22
Ellsworth	5	3,932	0	0	0	4	4
Finney	0	0	0	0	1	0	1
Grant	0	0	0	0	0	1	1
Greenwood	2	45	0	0	0	7	7
Harvey	7	2,265	2	0	2	7	9
Haskell	1	0	1	0	1	0	1
Kearny	0	0	0	0	0	1	1
Kingman	0	0	0	0	0	2	2
Lane	0	0	0	0	0	1	1
Logan	0	0	0	0	0	1	1
Lyon	0	0	0	0	0	1	1
Marion	0	0	0	0	0	2	2
McPherson	3	2,556	0	0	1	14	15
Meade	0	0	0	0	1	0	1
Mitchell	0	0	0	0	0	1	1
Morton	0	0	0	0	1	0	1
Ness	0	0	0	0	0	1	1
Pawnee	1	0	1	0	0	0	0
Pratt	1	200	0	0	0	1	1
Reno	10	5,807	3	0	7	33	40
Rice	27	12,854	5	0	22	61	83
Rooks	2	754	0	0	1	6	7
Rush	2	134	0	0	4	6	10
Russell	28	32,727	4	0	16	58	74
Saline	0	0	0	0	0	1	1
Sedgwick	1	15	0	0	0	5	5
Sheridan	1	0	1	0	0	0	0
Stafford	3	860	2	0	2	6	8
Stevens	1	0	0	1	0	2	2
Sumner	8	1,345	4	0	4	16	20
Trego	1	125	0	0	0	3	3
Woodson	4	30	3	0	1	9	10
Ttl. Feb.	148	87,474	42	2	78	333	411
Ttl. Jan.	126	80,790	30	5	80	315	395
Difference	22	6,684	12	3	2	18	16

GULF COAST FIELDS

Texas

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Ace	1	0	1	0	1	0	1
Amelia	1	576	0	0	2	0	2
Anahuac	6	2,484	1	1	2	6	8
Batson	1	65	0	0	0	0	0
Bay City	0	0	0	0	0	1	1
Teleferno	0	0	0	0	0	1	1
Big Hill	0	0	0	0	0	1	1
Big Creek	1	68	1	0	1	1	2
Blue Ridge	1	0	0	1	0	0	0
Boling	2	145	0	0	0	2	2
Clay Creek	1	0	1	0	0	2	2
Cleveland	1	421	0	0	1	0	1
Conroe	3	1,239	0	0	2	4	6
Cotton Lake	1	100	0	0	0	1	1
Dickinson	1	470	0	0	2	4	6
Esperson	1	0	1	0	0	1	1
Fannett	0	0	0	0	0	1	1
Five Corners	1	0	0	0	0	1	1
Goose Creek	3	163	1	0	0	1	1
Hughes	0	0	0	0	0	1	1
Hankamer	0	0	0	0	0	1	1
Hastings	8	4,529	0	0	0	4	6	10
Hawkinsville	0	0	0	0	0	1	1
Heyser	2	375	0	0	0	3	3
Hitchcock	1	0	1	0	0	1	1
High Island	3	470	0	0	1	2	3
Hull	1	260	0	0	0	3	3
Humble	1	200	0	0	0	0	0
Keeran	1	480	0	0	1	0	1
LaBelle	1	15	0	0	0	0	0
Lockridge	2	947	0	0	0	3	3
Louise	1	0	1	0	0	0	0
Magnet	0	0	0	0	0	1	1
Manvel	1	0	1	0	0	2	2
Markham	0	0	0	0	1	2	3
Nome	4	1,785	0	0	1	3	4
Old Ocean	0	0	0	0	0	1	1
Orchard	0	0	0	0	0	2	2
Pickett Rdg.	1	0	0	0	0	0	0
Pierce Jct.	1	765	0	0	0	1	1
Placedo	4	1,780	0	0	4	3	7
Raccoon Bend	5	345	3	0	0	2	2
Refugio	1	0	1	0	0	2	2
Sandy Point	1	47	0	0	0	0	0
Silsbee	2	445	0	0	2	1	3
Seabreeze	0	0	0	0	0	2	2
Segno	0	0	0	0	1	1	2
S. Houston	1	216	0	0	0	3	3
Spanish Camp	0	0	0	0	0	1	1
Tomball	5	1,798	0	0	2	3	5
Quintana-Oconnor	6	6,337	0	0	4	10	14
Turtle Bay	2	1,010	0	0	0	0	0
Van Vleck	0	0	0	0	0	2	2
W. Columbia	1	330	0	0	0	1	1
Withers	3	244	0	0	1	2	3
Misc.	8	0	8	0	6	28	34
Ttl. Feb.	92	28,109	21	2	39	121	160
Ttl. Jan.	92	24,765	26	2	32	103	135
Difference	0	3,344	6	0	7	18	25

Coastal Louisiana

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Bayou Bouillon	0	0	0	0	0	1	1
Bayou Mallet	1	0	0	1	0	1	1
Bay St. Elaine	1	0	1	0	0	0	0
Caillou Isl.	0	0	0	0	0	2	2
Cameron Meadows	0	0	0	0	0	2	2
Cankton	0	0	0	0	1	1	2
Charenton	0	0	0	0	0	2	2
Choctaw	0	0	0	0	0	1	1
Darrow	1	536	0	0	1	0	1
Dog Lake	0	0	0	0	0	1	1
Gillis	2	234	1	0	1	4	5
Garden Isl.	0	0	0	0	0	1	1
Hackberry	5	1,093	1	0	2	6	8
Jeanerette	2	1,150	0	0	1	3	4
Jennings	1	50	0	0	0	7	7
Lafitte	0	0	0	0	0	2	2
Lake Barre	0	0	0	0	0	1	1
Lake Hermitage	0	0	0	0	0	1	1
Lake Pelto	0	0	0	0	0	1	1
Leesville	1	143	0	0	0	4	4
New Iberia	3	1,056	1	0	2	5	7
Port Barre	0	0	0	0	0	1	1
Roanoke	1	551	0	0	0	1	1
Sorrento	0	0	0	0	0	1	1
Starks	0	0	0	0	0	1	1
Sulphur	1	250	0	0	1	3	4
Tepetate	2	292	0	0	2	2	4
Valentine	0	0	0	0	0	2	2
White Castle	0	0	0	0	0	1	1
Misc.	2	0	2	0	7	32	39
Ttl. Feb.	23	5,355	6	1	18	90	108
Ttl. Jan.	35	14,162	8	0	16	87	103
Difference	12	8,807	2	1	2	3	5

TEXAS PANHANDLE

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Briscoe	0	0	0	0	0	1	1
Carson	11	5,890	0	1	3	10	13
Childress	0	0	0	0	1	0	1
Collingsworth	0	0	0	0	0	2	2
Dallam	0	0	0	0	0	1	1
Deaf Smith	0	0	0	0	0	1	1
Gray	9	4,374	0	0	12	35	47
Hansford	0	0	0	0	0	1	1
Hutchinson	20	7,859	0	5	19	49	68
Moore	3	0	0	3	8	10	18
Ochiltree	0	0	0	0	1	0	1
Potter	1	0	0	1	1	0	1
Roberts	0	0	0	0	0	2	2
Wheeler	3	202	0	2	2	13	15
Total Feb.	47	18,325	0	12	47	125	172
Total Jan.	55	17,263	5	12	52	105	157
Difference	8	1,062	5	0	5	20	15

NORTH AND CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Archer	30	704	18	0	2	13	15
Callahan	7	8	5	1	2	4	6
Clay	3	0	3	0	1	2	3
Coleman	1	0	1	0	1	4	5
Comanche	0	0	0	0	0	1	1
Collin	0	0	0	0	2	2	4
Cooke	15	564	5	0	4	14	18
Denton	1	0	1	0	3	6	9
Eastland	0	0	0	0	1	7	8
Foard	0	0	0	0	0	1	1
Grayson	0	0	0	0	0	4	4
Hamilton	0	0	0	0	0	2	2
Hardeman	0	0	0	0	0	1	1
Jack	38	8,887	9	0	21	47	68
McCulloch	0	0	0	0	0	3	3
Montague	12	506	5	1	2	10	12
Palo Pinto	1	0	1	0	1	4	5
Shackelford	21	541	13	1	2	25	27
Stephens	1	0	1	0	3	5	8
Tarrant	0	0	0	0	0	2	2
Throckmort'n	1	0	1	0	1	2	3
Wichita	24	962	0	0	2	13	15
Wilbarger	3	170	1	0	0	2	2
Wise	0	0	0	0	1	1	2
Young	48	3,775	35	0	10	28	38
Ttl. Feb.	206	16,117	99	3	59	203	262
Ttl. Jan.	210	12,591	103	8	70	196	266
Difference	4	3,526	4	5	11	7	4

SOUTHWEST TEXAS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Agua Dulce	0	0	0	0	1	1	2
Alta Mesa	1	360	0	0	0	2	2
Alta Verde	0	0	0	0	0	1	1
Alta Vista	2	20	1	0	0	0	0
Aviator	0	0	0	0	1	0	1
Alworth	0	0	0	0	0	1	1
Barbacoas	0	0	0	0	1	0	1
Bentonville	2	0	2	0	1	3	4
Branyon	5	1,055	0	0	3	3	6
Charamousca	1	120	0	0	0	1	1
Charco Redondo	0	0	0	0	0	1	1
Clara Driscoll	3	1,405	0	0	2	4	6
Clark	0	0	0	0	1	1	2
Cole	1	0	1	0	0	2	2
Colmena	1	0	1	0	0	2	2
Colorado	1	0	1	0	0	0	0
Crowther	1	10	0	0	0	0	0
Darst Creek	1	145	0	0	0	1	1
Driscoll	0	0	0	0	0	1	1
Escobas	10	340	0	1	1	4	5
Flour Bluff	5	715	0	0	0	6	6
Govt. Wells	5	255	1	0	1	4	5
Haynes	13	440	2	0	2	3	5
Hoffman	5	560	0	0	0	5	5
Kingsville	0	0	0	0	1	0	1
Kohler	4	0	2	2	1	1	2
Labbe	0	0	0	0	0	1	1
La Blanca	1	40	0	0	0	2	2
La Sal Vieja	0	0	0	0	0	1	1
Loma Novia	10	1,505	2	0	1	6	7
Lopena	0	0	0	0	1	1	2
Lopez	13	5,095	1	1	2	3	5
Los Olmos	0	0	0	0	2	0	2
Lucas	1	0	0	1	0	0	0
McCampbell	1	100	0	0	1	4	5
Mercedes	0	0	0	0	0	1	1
Noack	1	200	0	0	0	0	0
Nolte	0	0	0	0	2	1	3
N. Pettus	1	0	1	0	1	0	1
Oakville	1	0	1	0	0	1	1
O'Hern	8	1,255	1	0	1	4	5
Pearsall	1	180	0	0	1	0	1
Plymouth	2	350	0	0	1	2	3
Peters	2	0	1	1	0	2	2
Piedra Lumbre	1	75	0	0	0	1	1
Randado	0	0	0	0	0	2	2
Ray	1	0	1	0	0	0	0
Rhode	1	0	0	1	0	0	0
Rio Grande City	1	0	1	0	0	1	1
Sal Mar	0	0	0	0	0	1	1
Samfordyce	3	240	0	0	1	3	4
Sandia	0	0	0	0	0	1	1
Sarnosa	2	215	1	0	0	1	1
Saxet	24	4,115	3	1	6	31	37
Saxet Heights	3	240	0	0	1	5	6
Seven Sisters	11	4,175	0	2	2	4	6
Slick	0	0	0	0	0	1	1
Stratton	0	0	0	0	0	1	1
Sullivan	0	0	0	0	0	2	2
Sweden	1	110	0	0	0	2	2
Taft	3	355	0	0	0	4	4
Von Ormy	1	5	0	0	1	0	1
W. Premont	3	315	1	0	3	3	6
White Point	0	0	0	0	0	1	1
Zoborowski	1	25	0	0	0	0	0
Misc.	22	0	22	0	23	37	60
Ttl. Feb.	181	24,020	47	10	69	175	244
Ttl. Jan.	283	45,090	63	14	65	187	252
Difference	102	21,070	16	4	4	12	8

WEST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Andrews	4	766	2	0	5	11	16
Brewster	0	0	0	0	0	2	2
Coke	0	0	0	0	1	0	1
Crane	15	7,304	0	0	3	36	39
Crockett	2	0	2	0	1	1	2
Dawson	0	0	0	0	0	1	1
Ector	8	7,881	0	0	4	44	48
Edwards	1	0	1	0	0	0	0
El Paso	0	0	0	0	0	1	1
Fisher	0	0	0	0	3	5	8
Gaines	2	0	2	0	0	1	1
Garza	1	50	0	0	0	2	2
Glasscock	2	511	0	0	1	5	6
Hockley	0	0	0	0	0	1	1
Howard	9	5,114	0	0	7	17	24
Hudspeth	0	0	0	0	0	1	1
Jeff Davis	0	0	0	0	0	1	1
Jones	14	5,737	5	0	5	20	25
Kimble	0	0	0	0	1	0	1
Loving	0	0	0	0	1	4	5
Nolan	0	0	0	0	0	1	1
Pecos	12	1,939	5	0	3	32	35
Presidio	0	0	0	0	0	1	1
Reagan	0	0	0	0	0	1	1
Runnels	0	0	0	0	0	2	2
Reeves	0	0	0	0	0	1	1
Schleicher	0	0	0	0	1	1	2
Scurry	0	0	0	0	0	2	2
Terrell	0	0	0	0	0	1	1
Terry	1	0	1	0	0	1	1
Tom Green	0	0	0	0	0	2	2
Upton	16	7,079	0	0	9	31	40
Ward	37	48,023	1	1	23	70	93
Winkler	56	49,419	0	1	24	69	93
Yoakum	0	0	0	0	1	1	2
Ttl. Feb.	180	133,823	19	2	93	369	462
Ttl. Jan.	186	128,043	19	1	89	337	426
Difference	6	5,780	0	1	4	32	36

NORTH LOUISIANA

Summary of Field Operations

Parish—	Comp.	Prod.	Dry	Gas*	Rgs.	Dlg.	Ttl.
Blenville	0	0	0	0	0	3	3
Bossier	1	0	0	1	2	10	12
Caddo-Rodessa	4	1,536	0	0	6	15	21
Caddo-Other	4	70	1	0	4	17	21
Caldwell	0	0	0	0	1	0	1
Catahoula	0	0	0	0	1	0	1
Claiborne	0	0	0	0	0	6	6
DeSoto	0	0	0	0	1	8	9
Franklin	0	0	0	0	0	1	1
Grant	2	0	2	0	0	1	1
Jackson	0	0	0	0	0	1	1
LaSalle	1	0	1	0	0	2	2
Morehouse	1	0	0	1	2	0	2
Natchitoches	0	0	0	0	0	3	3
Ouachita	2	0	0	2	1	0	1
Red River	1	30	0	0	0	2	2
Richland	0	0	0	0	0	1	1
Sabine	2	0	2	0	0	6	6
Tensas	0	0	0	0	0	2	2
Union	0	0	0	0	2	0	2
Webster	3	643	2	0	1	10	11
Winn	1	0	1	0	1	0	1
Ttl. Feb.	22	2,279	9	4	22	88	110
Ttl. Jan.	37	6,912	10	8	20	79	99
Difference	15	4,633	1	4	2	9	11

*Gas production: Bossier, 33,320,000 feet; Morehouse, 4,000,000 feet; Ouachita, 4,000,000 feet.

Rodessa wells gauged by making one-hour flow through restricted choke and multiplying by 24.

ARKANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Calhoun	0	0	0	0	0	1	1
Clark	0	0	0	0	1	1	2
Cleveland	1	0	1	0	0	0	0
Dallas	0	0	0	0	0	1	1
Grant	0	0	0	0	0	1	1
Hempstead	2	0	2	0	0	4	4
Lafayette	1	0	1	0	0	2	2
Little River	0	0	0	0	0	2	2
Lonoke	0	0	0	0	1	0	1
Miller	1	0	1	0	1	2	3
Nevada	3	370	1	0	6	10	16
Ouachita	1	60	0	0	0	4	4
Poke	0	0	0	0	0	1	1
Sevier	0	0	0	0	1	0	1
Union	1	0	1	0	2	5	7
Ttl. Feb.	10	430	7	0	12	34	46
Ttl. Jan.	6	150	4	0	12	34	46
Difference	4	280	3	0	0	0	0

EAST TEXAS (Border Counties)

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas*	Rgs.	Dlg.	Ttl.
Bowie	0	0	0	0	0	3	3
Cass (Rodessa)	30	15,294	0	2	7	43	50
Harrison	0	0	0	0	1	7	8
Marion	0	0	0	0	1	7	8
Panola	0	0	0	0	2	2	4
Sabine	0	0	0	0	0	1	1
Shelby	1	0	1	0	0	3	3
Ttl. Feb.	31	15,294	1	2	11	66	77
Ttl. Jan.	27	12,117	1	2	10	66	76
Difference	4	3,177	0	0	1	0	1

*Gas production: Cass, 6,500,000 feet.

Rodessa wells gauged by making one-hour flow through restricted choke and multiplying by 24.

EAST CENTRAL AND EAST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Anderson	1	64	0	0	1	9	10
Angelina	0	0	0	0	2	4	6
Bowie	0	0	0	0	0	4	4
Cherokee	1	0	1	0	2	0	2
Falls	1	0	1	0	0	4	4
Fannin	0	0	0	0	0	4	4
Franklin	4	684	0	0	4	4	8
Freestone	1	0	1	0	0	1	1
Gregg	69	3,015	0	0	24	29	53
Henderson	1	171	0	0	2	3	5
Hopkins	3	97	0	0	1	6	7
Hunt	0	0	0	0	1	2	3
Kaufman	0	0	0	0	1	0	1
Lamar	0	0	0	0	0	1	1
Leon	0	0	0	0	1	0	1
Limestone	0	0	0	0	1	1	2
Navarro	0	0	0	0	1	0	1
Rains	0	0	0	0	0	1	1
Red River	0	0	0	0	0	4	4
Rusk	38	1,551	0	0	20	22	42
Smith	11	296	0	0	1	3	4
Titus	24	3,272	0	0	6	30	36
Upshur	22	671	2	0	9	16	25
Van Zandt	1	0	1	0	1	5	6
Wood	1	0	1	0	0	0	0
Ttl. Feb.	178	9,821	7	0	78	153	231
Ttl. Jan.	232	15,507	14	3	71	134	205
Difference	54	5,686	7	3	7	19	26

ALABAMA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Choctow	0	0	0	0	0	1	1
Houston	0	0	0	0	0	1	1
Washington	1	0	1	0	0	0	0
Total Feb.	1	0	1	0	0	2	2
Total Jan.	0	0	0	0	0	2	2
Difference	1	0	1	0	0	0	0

MISSISSIPPI

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Amity	0	0	0	0	0	1	1
Hinds	1	0	1	0	0	1	1
Lafayette	1	6	1	0	0	0	0
Bolivar	0	0	0	0	0	1	1
Washington	0	0	0	0	0	1	1
Lauderdale	1	0	1	0	0	0	0
Simpson	0	0	0	0	1	0	1
Claiborne	0	0	0	0	0	1	1
Jones	0	0	0	0	1	0	1
Grenada	0	0	0	0	1	0	1
Lamar	0	0	0	0	0	2	2
Harrison	0	0	0	0	0	1	1
Yalobusha	0	0	0	0	1	0	1
Kemper	0	0	0	0	1	0	1
Perry	0	0	0	0	0	1	1
Total Feb.	3	0	3	0	5	9	14
Total Jan.	3	0	3	0	4	11	15
Difference	0	0	0	0	1	2	1

FLORIDA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Lake	0	0	0	0	0	2	2
Nassau	0	0	0	0	0	1	1
Hillsborough	0	0	0	0	0	1	1
Total Feb.	0	0	0	0	0	4	4
Total Jan.	0	0	0	0	0	4	4
Difference	0	0	0	0	0	0	0

ROCKY MOUNTAIN AREA

Colorado

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Drlg.	Ttl.
Adams	0	0	0	0	0	2	2
Archuleta	0	0	0	0	0	6	6
Kiowa	1	0	1	0	0	0	0
La Plata	0	0	0	0	0	2	2
Larimer	0	0	0	0	0	2	2
Las Animas	0	0	0	0	0	3	3
Moffat	1	840	0	0	2	2	4
Park	0	0	0	0	0	3	3
Miscel.	0	0	0	0	0	8	8
Ttl. Feb.	2	840	1	0	0	2	2
Ttl. Jan.	2	0	2	0	2	30	32
Difference	0	840	1	0	0	2	2

Wyoming

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Albany	1	216	0	0	1	2	3
Big Horn	0	0	0	0	0	9	9
Carbon	0	0	0	0	0	5	5
Converse	0	0	0	0	0	3	3
Fremont	0	0	0	0	0	3	3
Lincoln	0	0	0	0	0	4	4
Niobrara	5	4,194	1	0	0	7	7
Park	0	0	0	0	0	1	1
Uinta	0	0	0	0	0	2	2
Washakie	2	2	1	0	0	2	2
Weston	1	0	1	0	0	2	2
Miscel.	0	0	0	0	0	6	6
Ttl. Feb.	9	4,412	3	0	1	46	47
Ttl. Jan.	6	2,910	1	0	4	47	51
Difference	3	1,502	2	0	3	1	4

New Mexico

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Bernalillo	0	0	0	0	0	2	2
McKinley	0	0	0	0	0	6	6
Santa Fe	0	0	0	0	0	2	2
San Juan	1	0	1	0	0	3	3
San Miguel	0	0	0	0	0	3	3
Valencia	0	0	0	0	0	1	1
Lea	28	43,925	2	1	6	66	72
Eddy	4	150	2	1	0	1	1
Roosevelt	1	0	1	0	0	2	2
Otero	0	0	0	0	0	2	2
Chaves	0	0	0	0	0	1	1
Ttl. Feb.	34	44,075	6	2	6	89	95
Ttl. Jan.	56	37,968	8	1	20	110	130
Difference	22	6,107	2	1	14	21	35

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Montana

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Big Horn	0	0	0	0	0	1	1
Carbon	0	0	0	0	0	4	4
Fallon	1	0	1	0	0	2	2
Fergus	0	0	0	0	0	7	7
Glacier	2	100	1	0	2	8	10
Petroleum	0	0	0	0	0	2	2
Phillips	0	0	0	0	0	3	3
Pondera	0	0	0	0	1	3	4
Toole	0	0	0	0	1	10	11
Yellowstone	1	100	0	0	0	0	0
Miscellaneous	0	0	0	0	0	8	8
Total Feb.	4	200	2	0	4	48	52
Total Jan.	8	939	1	2	5	46	51
Difference	4	739	1	2	1	2	2

Utah

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Total Feb.	0	0	0	0	1	7	8
Total Jan.	0	0	0	0	1	7	8
Difference	0	0	0	0	0	0	0

Nebraska

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Dawes	1	0	1	0	0	0	0
Miscellaneous	0	0	0	0	0	2	2
Total Feb.	1	0	1	0	0	2	2
Total Jan.	1	0	1	0	0	3	3
Difference	0	0	0	0	0	1	1

CENTRAL OHIO FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Ashland	2	0	1	1	2	8	10
Athens	6	0	4	2	5	18	23
Coshocton	2	74	0	1	2	4	6
Cuyahoga	1	0	0	1	0	2	2
Delaware	0	0	0	0	0	1	1
Fairfield	1	0	1	0	0	2	2
Gallia	1	0	1	0	0	0	0
Harrison	0	0	0	0	0	1	1
Huron	0	0	0	0	0	2	2
Holmes	2	0	1	1	2	6	8
Hocking	1	0	1	0	0	4	4
Knox	5	82	0	3	3	6	9
Licking	3	22	0	0	2	7	9
Lorain	4	0	1	3	3	8	11
Medina	0	0	0	0	2	7	9
Meigs	8	0	2	6	6	16	22
Morgan	2	1	1	0	1	8	9
Perry	5	71	2	1	4	7	11
Portage	1	0	1	0	0	1	1
Richland	1	0	1	0	0	2	2
Stark	11	0	0	11	3	17	20
Scioto	1	0	0	1	0	0	0
Summit	2	0	1	1	1	3	4
Tuscarawas	1	0	1	0	2	3	5
Wayne	2	0	2	0	3	6	9
Vinton	0	0	0	0	0	6	6
Total Feb.	62	260	21	32	43	145	188
Total Jan.	78	250	26	40	48	152	200
Difference	16	10	5	8	5	7	12

KENTUCKY FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Henderson	0	0	0	0	0	4	4
Johnson	0	0	0	0	0	5	5
McLean	1	150	0	0	4	19	23
Ohio	5	185	1	0	8	18	26
Warren	0	0	0	0	0	2	2
Wayne	0	0	0	0	0	6	6
Total Feb.	6	335	1	0	12	44	56
Total Jan.	19	600	6	0	12	48	60
Difference	13	265	5	0	0	4	4

PENNSYLVANIA GRADE FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Bradford	*179	145	0	0	15	84	99
Allegany	†69	33	0	0	7	40	47
N. Y.-Pa. gas	4	0	0	4	4	21	25
Venango-Clarion	14	13	0	2	7	11	18
Butler-Armstrong	4	4	0	0	2	8	10
S. W. Pa.	10	12	2	6	11	40	51
S. E. Ohio	38	410	13	12	9	47	56
W. Virginia	72	116	11	49	25	131	156
Ttl. Feb.	390	733	26	73	80	382	462
Ttl. Jan.	433	540	30	66	87	425	512
Difference	43	193	4	7	7	43	50

*Includes 70 water intake wells. †Includes 36 water intake wells.

LIMA FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Allen	0	0	0	0	0	1	1
Darke	0	0	0	0	0	1	1
Hancock	4	7	1	0	2	2	4
Hardin	0	0	0	0	0	4	4
Fulton	0	0	0	0	0	2	2
Lucas	0	0	0	0	0	1	1
Logan	0	0	0	0	0	2	2
Putnam	0	0	0	0	0	3	3
Sanducky	0	0	0	0	0	2	2
Seneca	0	0	0	0	2	4	6
Wood	0	0	0	0	0	5	5
Wyandot	0	0	0	0	0	2	2
Total Feb.	4	7	1	0	4	29	33
Total Jan.	9	100	1	3	4	29	33
Difference	5	93	0	3	0	0	0

ILLINOIS FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Boyd	0	0	0	0	1	0	1
Clay	0	0	0	0	0	1	1
Clinton	0	0	0	0	0	2	2
Macon	0	0	0	0	1	0	1
Marion	0	0	0	0	0	2	2
Jackson	0	0	0	0	0	1	1
Jefferson	0	0	0	0	0	1	1
Jasper	0	0	0	0	0	2	2
Wayne	0	0	0	0	0	3	3
Total Feb.	0	0	0	0	2	12	14
Total Jan.	0	0	0	0	3	11	14
Difference	0	0	0	0	1	1	0

INDIANA FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Daviess	0	0	0	0	0	3	3
Decatur	0	0	0	0	0	4	4
Gibson	1	0	1	0	1	2	3
Hancock	0	0	0	0	0	1	1
Harrison	0	0	0	0	0	1	1
Hamilton	0	0	0	0	1	0	1
Jay	0	0	0	0	0	2	2
Knox	0	0	0	0	1	3	4
Martin	0	0	0	0	0	1	1
Perry	0	0	0	0	1	2	3
Pike	3	20	0	2	1	5	6
Posey	0	0	0	0	0	1	1
Randolph	0	0	0	0	0	1	1
Ripley	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	1	1
Spencer	0	0	0	0	0	2	2
Vanderburgh	3	25	2	0	0	3	5
Vigo	0	0	0	0	0	1	1
Warrick	0	0	0	0	0	2	2
Total Feb.	7	45	3	2	5	34	39
Total Jan.	17	27	10	2	6	32	38
Difference	10	18	7	0	1	2	1

MICHIGAN

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Alcona	0	0	0	0	1	1	1
Allegan	1	25	0	0	0	1	1
Arenac	5	1,057	0	0	8	11	19
Cass	0	0	0	0	1	0	1
Chippewa	0	0	0	0	0	1	1
Clare	0	0	0	0	0	1	1
Clinton	1	0	1	0	0	0	0
Gladwin	9	7,363	2	0	7	26	37
Gratiot	8	0	3	5	6	5	11
Hillsdale	0	0	0	0	0	1	1
Huron	1	0	1	0	0	0	0
Ingham	0	0	0	0	2	0	2
Ionia	0	0	0	0	1	0	1
Isabella	5	359	3	1	8	18	27
Jackson	0	0	0	0	1	0	1
Kent	0	0	0	0	0	1	1
Lake	0	0	0	0	0	1	1
Lapeer	0	0	0	0	0	1	1
Lenawee	1	0	1	0	0	2	2
Livingston	1	0	1	0	0	0	0
Mackinac	0	0	0	0	1	0	1
Macomb	0	0	0	0	1	0	1
Manistee	1	0	1	0	0	0	0
Mecosta	1	0	0	1	1	4	5
Midland	3	370	1	0	8	7	15
Missaukee	0	0	0	0	1	0	1
Monroe	2	0	2	0	1	1	2
Montcalm	2	75	0	1	9	13	22
Muskegon	5	0	2	3	0	2	2
Oceana	1	0	1	0	1	0	1
Ogemaw	3	405	0	0	5	12	17
Osceola	0	0	0	0	1	1	2
Otsego	0	0	0	0	0	1	1
Ottawa	0	0	0	0	1	0	1
Saginaw	0	0	0	0	1	0	1
St. Clair	1	0	1	0	0	1	1
Shiawassee	0	0	0	0	0	1	1
Tuscola	0	0	0	0	0	1	1
Washtenaw	0	0	0	0	0	2	2
Wayne	0	0	0	0	1	3	4
Ttl. Feb.	51	9,664	20	11	67	123	198
Ttl. Jan.	45	5,768	22	6	68	132	200
Difference	6	3,896	2	5	1	9	10

New Mexico Bulletin

The New Mexico School of Mines and the State Bureau of Mines and Mineral Resources, under the direction of Dr. E. H. Wells, has issued Bulletin No. 12 dealing with "The Non-Metallic Mineral Resources of New Mexico and Their Economic Features" (exclusive of fuels). This bulletin was prepared by Sterling B. Talmage and Thomas P. Wootton and to anyone interested in the resources of New Mexico should prove of value. In addition to 160 pages of information an excellent map of the state is included. Copies can be secured from New Mexico School of Mines, Socorro, N. Mex.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil Co., No. 1-23 Capitan, Santa Barbara Co.	32- 5-30	1,305	cmtd. 1,214
Barnsdall-Rio Grande, No. 19 Elwood, Santa Barbara	15- 4-29	3,636	completing
Signal Oil & Gas, No. 98-9 Elwood, Santa Barbara Co.	tideland	3,679	cmtd.
Bush Oil Co., No. 4 Santa Maria, Santa Barbara Co.	30-10-33	4,460	O.S. drlg.
Union Oil Co., No. 2 Santa Maria, Santa Barbara Co.	30-10-33	3,791	completing
Union Oil Co. No. 1-0 Santa Maria, Santa Barbara Co.	21-10-34	612	sd. sh. drlg.
Union Oil Co., No. 12 Orcutt, Santa Barbara Co.	26- 9-34	3,682	O.S. drlg.
Union Oil Co., No. 17 Orcutt, Santa Barbara Co.	26- 9-34	3,438	sd. sh. drlg.
Barnsdall Oil Co., No. 9 Gato Ridge, Santa Barbara Co.	9- 8-32	2,465	idle
Field Gasoline Corp., No. 1 Gato Ridge, Santa Barbara	4- 8-32	2,812	cleaning out
Stewart-Carter Oil Co., No. 1 Gato Ridge, Santa Barbara	4- 8-32	2,311	cmtd. 2,160
Moore, Inc., No. 1 Santa Barbara, Santa Barbara Co.	25-10-35	8,090	dry; abd.
Nine Springs Oil Co., No. 1 Los Olivos, Santa Barbara	9- 7-30	3,080	reaming
Fisher, Dan, No. 1 Cuyama, Santa Barbara Co.	28-11-28	646	sd. sh. drlg.
The Texas Co., No. 132 Shiells, Ventura Co.	4- 3-19	3,123	will cmt.
Calumet Oil Co., No. 16 Shiells, Ventura Co.	3- 3-19	4,265	sd. sh. drlg.
Condor Oil Co., No. 1 Sespe, Ventura Co.	6- 4-19	1,500	br. sh. drlg.
Merchants Pet. Co., No. 7 Sespe, Ventura Co.	1- 4-19	687	sd. sh. drlg.
Speik Oil Co., No. 2 Sespe, Ventura Co.	33- 5-19	1,891	sd. sh. drlg.
Colima Oil Co., No. 2 Sespe, Ventura Co.	25- 5-19	1,612	sd. sh. drlg.
Boisa Chica Oil Co., No. 4 Temescal, Ventura Co.	4- 4-18	3,534	cleaning out
Boisa Chica Oil Co., No. 5 Temescal, Ventura Co.	5- 4-18	760	sd. sh. drlg.
Pacific Western Oil Co., No. 10 Temescal, Ventura Co.	3- 4-18	1,884	sd. sh. drlg.
St. Louis Oil Co., No. 3 Ojai, Ventura Co.	13- 4-24	671	hd. sd. drlg.
Continental Oil Co., No. 1 Red Mountain, Ventura Co.	7- 3-23	5,683	bl. sh. drlg.
C. C. M. Oil Co., No. 2 Padre Canyon, Ventura Co.	23- 3-24	6,465	cmtd. fish
C. C. M. Oil Co., No. 5-A Padre Canyon, Ventura Co.	15- 3-24	792	sd. sh. drlg.
Continental Oil Co., No. 3 Padre Canyon, Ventura Co.	15- 3-24	1,896	sd. sh. drlg.
Honolulu Oil Corp., No. 1 South Mountain, Ventura Co.	23- 3-21	6,744	cleaning out
Calco Pet. Corp., No. 4 South Mountain, Ventura Co.	17- 3-20	3,700	sd. sh. drlg.
Associated Oil Co., No. 27 Hartman, Ventura, Ventura	22- 3-23	5,930	cleaning out
Associated Oil Co., No. 25 V.L.W., Ventura, Ventura Co.	23- 3-23	7,055	redrlg. 7,050
Associated Oil Co., No. 28 Lloyd, Ventura, Ventura Co.	27- 3-23	6,850	swabbing
Associated Oil Co., No. 29 Lloyd, Ventura, Ventura Co.	27- 3-23	2,200	sd. sh. drlg.
Associated Oil Co., No. 64 Lloyd, Ventura, Ventura Co.	27- 3-23	2,693	sd. sh. drlg.
Associated Oil Co., No. 137 Lloyd, Ventura, Ventura Co.	27- 3-23	3,971	sd. sh. drlg.
Shell Oil Co., No. 89 Taylor, Ventura, Ventura Co.	30- 3-23	7,390	O.S. drlg.
Shell Oil Co., No. 34 Gosnell, Ventura, Ventura Co.	23- 3-23	7,563	redrlg. 7,121
General Pet. Corp., No. 17 Barnard, Ventura, Ventura	23- 3-23	6,695	reaming
Continental Oil Co. No. 6 San Miguelito, Ventura Co.	24- 3-24	5,920	O.S. drlg.
C. C. M. Oil Co., No. 13-B Rincon, Ventura Co.	8- 3-24	3,100	sd. sh. drlg.
General Petroleum Corp., No. 3-A Rincon, Ventura Co.	8- 3-24	4,512	rebldg. rig
Lube Oil Co., No. 1 Devils Den, Kern Co.	2-25-18	4,050	br. sh. drlg.
Den Petroleum Co., No. 1 Devils Den, Kern Co.	20-25-19	3,208	idle
Standard Oil Co., No. 3 United, Lost Hills, Kern Co.	2-26-20	1,407	rig. to pump
The Texas Co., No. 1 Theta, Lost Hills, Kern Co.	11-26-20	2,037	pump. 205 b.d.
Peters Royalty Corp., No. 2 McKittrick, Kern Co.	32-29-22	1,698	recmtd. 1,658
Continental Oil Co., No. 1 Wasco, Kern Co.	8-27-24	9,545	fish. bailer
Seaboard Oil Corp., No. 1 Wasco, Kern Co.	26-27-24	1,764	sd. sh. drlg.
Belridge Oil Co., No. 14-35 North Belridge, Kern Co.	35-27-20	8,250	O.S. drlg.
Belridge Oil Co., No. 24-35 North Belridge, Kern Co.	35-27-20	4,190	sd. sh. drlg.
Belridge Oil Co., No. 62-27 North Belridge, Kern Co.	27-27-20	6,498	br. sh. drlg.
Belridge Oil Co., No. 21-1 North Belridge, Kern Co.	1-28-20	5,294	br. sh. drlg.
Doyle Pet. Co., No. 2 Quinn, Jasmine, Kern Co.	15-25-27	810	sd. sh. drlg.
Calif. Western Oil Co., No. 2 Round Mountain, Kern	12-28-28	2,078	cmtd. 2,035
Italo Pet. Co., No. 1 Kern Front, Kern Co.	17-28-27	3,054	sd. sh. drlg.
Tide Water Associated, No. 3 Kern Front, Kern Co.	4-28-27	2,811	cmtd. 2,746
Honolulu Oil Corp., No. 68 Kern Front, Kern Co.	8-28-27	2,798	pump. 105 b.d.
M. H. Whittier Co., No. 4 Kern Front, Kern Co.	16-28-27	1,530	sd. sh. drlg.
Oil, Inc., No. 7-2 Kern Front, Kern Co.	13-28-27	665	sd. sh. drlg.
Cedar Oil Co., No. 3 Brown, Kern Front, Kern Co.	8-28-27	3,020	sd. sh. drlg.
Seskayden Oil Co., No. 4 Kern Front, Kern Co.	17-28-27	2,902	cmtd. 2,877
California Star Oil Co., No. 7-80 Kern Front, Kern Co.	22-28-27	1,654	bailing
California Star Oil Co., No. 9-40 Kern Front, Kern Co.	22-28-27	1,572	sd. sh. drlg.
Standard Oil Co., No. 4 Ward, Kern Front, Kern Co.	24-28-27	1,775	O.S. drlg.
Standard Oil Co., No. 5-9 Kern Front, Kern Co.	9-28-27	2,753	sd. sh. drlg.
Pioneer Oil Co., No. 1 Kern Front, Kern Co.	18-28-28	1,115	cmtd. 1,090
National Oil Co., No. 9 Gates, Kern Front, Kern Co.	2-28-29	1,450	cleaning out
McManus, Thomas, No. 3 Kern River, Kern Co.	2-29-28	451	sd. sh. drlg.
Bojaki Oil Co., No. 1 Premier, Kern Co.	28-27-27	1,885	sd. sh. drlg.
Roscoe & Stanley, No. 3 Newhope, Premier, Kern Co.	29-27-27	2,684	flow. 370 b.d.
Ring Oil Co., No. 3 Knapp, Mount Poso, Kern Co.	28-26-28	1,470	rig. to pump.
Harp, E. J., No. 1 Mount Poso, Kern Co.	27-26-28	1,845	P.B. 1,460
C. C. M. Oil Co., No. 1 Alford, Mount Poso, Kern Co.	35-27-27	2,420	gr. sd. drlg.
Goldman, F., No. 2 Mount Poso, Kern Co.	35-27-28	1,506	pump. 55 b.d.
W. H. G. Oil Co., No. 1 McVan, Mount Poso, Kern Co.	10-27-27	1,570	bailing
Magee, H. H., No. 2 Fruitvale, Kern Co.	23-29-27	3,244	C.P. 3,208
H. & H. No. 1 Fruitvale, Kern Co.	23-29-27	3,250	cmtd. 3,232
Western Gulf Oil Co., No. 35 Fruitvale, Kern Co.	21-29-27	3,630	sd. sh. drlg.
Geick, Edward, No. 1 Fruitvale, Kern Co.	23-29-27	2,591	sd. sh. drlg.
Kasey & Associates, No. 1 Fruitvale, Kern Co.	23-29-27	3,114	P.B. 3,105
Seahawk Pet. Co., No. 3 Fruitvale, Kern Co.	23-29-27	1,520	sd. sh. drlg.
Banducci, L. J., No. 2-T Fruitvale, Kern Co.	26-29-27	3,260	sd. sh. drlg.
Magnet Oil Co., No. 4 Fruitvale, Kern Co.	21-29-27	4,160	bailing
Trico Oil & Gas Co., No. 2 Fruitvale, Kern Co.	23-29-27	1,765	sd. sh. drlg.
Vesta Oil Co., No. 1 Mountain View, Kern Co.	19-30-29	4,840	sd. sh. drlg.
Wood-Callahan Oil Co., No. 3 Mountain View, Kern Co.	25-30-28	5,885	O.S. drlg.
Hogan Pet. Co., No. 4 Symons, Mountain View, Kern	5-31-29	5,482	sd. sh. drlg.
Hogan Pet. Co., No. 8 Wharton, Mountain View, Kern	32-30-29	4,594	sd. sh. drlg.
Liko Pet. Co., No. 1 Mountain View, Kern Co.	19-30-29	4,750	sd. sh. drlg.
Ohio Oil Co., No. 1-B Derby, Mountain View, Kern Co.	33-30-29	5,661	sd. sh. drlg.
Trico Oil Co., No. 2 Wilson, Mountain View, Kern Co.	13-30-28	1,952	sd. sh. drlg.
Mohawk Pet. Co., No. 3 Hood, Mountain View, Kern	30-30-29	6,015	flow. 420 b.d.
Mohawk Pet. Co., No. 2-C Mountain View, Kern Co.	30-30-29	5,955	swabbing
Mohawk Pet. Co., No. 9-C Mountain View, Kern Co.	30-30-29	2,740	sd. sh. drlg.
Johnson-Leaf Oil Co., No. 1 Edison, Kern Co.	24-30-29	1,525	redrlg. 1,300
Mohawk Pet. Co., No. 3 Earl, Arvin, Kern Co.	4-31-29	5,356	cmtd. 5,132
General Petroleum Corp., No. 1 Arvin, Kern Co.	26-31-29	7,395	cleaning out
Bear Mountain Oil Co., No. 1 Arvin, Kern Co.	21-31-30	2,160	sd. sh. drlg.
Arkelo Oil Co., No. 1 Lerdo, Kern Co.	23-28-26	9,154	gr. sd. drlg.
Associated Oil Co., No. 1 Rio Bravo, Kern Co.	30-29-25	8,651	sd. sh. drlg.
Continental Oil Co., No. 1 Rosedale, Kern Co.	12-29-26	4,869	sd. sh. drlg.
Standard Oil Co., No. 11-2 Greeley, Kern Co.	20-29-26	7,735	sd. sh. drlg.
Standard Oil Co., No. 11-3 Greeley, Kern Co.	20-29-26	6,076	sd. sh. drlg.
Standard Oil Co., No. 12-1 Greeley, Kern Co.	30-29-26	7,513	sd. sh. drlg.
Standard Oil Co., No. 14-1 Greeley, Kern Co.	4-30-26	7,166	sd. sh. drlg.
Mohawk Pet. Co., No. 1 Greeley, Kern Co.	23-29-25	1,871	sd. sh. drlg.
Union Oil Co., No. 1 San Emidio, Kern Co.	34-11-22	4,385	sd. sh. drlg.
Shell Oil Co., No. 78-30 Ten Section, Kern Co.	30-30-26	8,438	O.S. drlg.
Shell Oil Co., No. 23-30 Ten Section, Kern Co.	30-30-26	1,000	cmtd. 1,000
Signal Oil & Gas Co., No. 1 Ten Section, Kern Co.	21-30-27	6,741	sd. sh. drlg.
Standard Oil Co., No. 9-1 Ten Section, Kern Co.	34-30-26	8,915	dry; abd.
Superior Oil Co., No. 8 Ten Section, Kern Co.	11-30-26	10,409	cmtd. 10,380
Ohio Oil Co., No. 4-A Buena Vista Lake, Kern Co.	32-31-26	4,762	sd. sh. drlg.
C. C. M. Oil Co., No. 26-21 Midway-Sunset, Kern Co.	21-32-23	2,335	rig. to pump
C. C. M. Oil Co., No. 33-21 Midway-Sunset, Kern Co.	21-32-23	2,635	recmtd. 1,685
C. C. M. Oil Co., No. 1-J Midway-Sunset, Kern Co.	21-32-23	2,200	rig. to pump
Hancock Oil Co., No. 5 Midway-Sunset, Kern Co.	8-11-23	3,057	flow. 160 b.d.
Midcrude Oil Co., No. 2 Midway-Sunset, Kern Co.	22-32-23	1,590	sd. sh. drlg.
Hallmark Oil Co., No. 6 Fried, Midway-Sunset, Kern	25-12-24	2,896	P.B. 2,830
General Pet. Corp., No. 49 Midway-Sunset, Kern Co.	24-31-23	4,424	cmtd. 4,380
R. & W. Oil Co., No. 4 Midway-Sunset, Kern Co.	6-11-23	3,204	sd. sh. drlg.
Berry Oil Co., No. 21 Midway-Sunset, Kern Co.	34-12-24	590	O.S. cmtd.
Merritt-Annex Oil Co., No. 4 Midway-Sunset, Kern Co.	25-12-24	1,530	sd. sh. drlg.
Standard Oil Co., No. 79-33-D Midway-Sunset, Kern Co.	33-32-24	2,781	sd. sh. drlg.
Standard Oil Co., No. 39-23-D Midway-Sunset, Kern Co.	23-32-24	3,708	P.B. 3,660
Standard Oil Co., No. 7-33-D Midway-Sunset, Kern Co.	33-32-24	1,222	sd. sh. drlg.
Standard Oil Co., No. 52-33-D Midway-Sunset, Kern Co.	33-32-24	2,725	sd. sh. drlg.
Burkholder Oil Co., No. 2 Midway-Sunset, Kern Co.	23-32-23	1,400	idle
Gibson Oil Co., No. 4 O'Brian, Midway-Sunset, Kern Co.	6-11-23	3,065	pump. 198 b.d.
Richfield Oil Co., No. 12 Midway-Sunset, Kern Co.	6-32-23	1,635	P.B. 1,502
North American Oil Co., No. 5 Midway-Sunset, Kern	25-12-24	2,600	sd. sh. drlg.
The Texas Co., No. 19 Midway-Sunset, Kern Co.	32-24-24	1,976	sd. sh. drlg.
Birch-Ranch Oil Co., No. 2 Midway-Sunset, Kern Co.	22-32-23	2,165	O.S. drlg.
Valley Oil Co., No. 1 Midway-Sunset, Kern Co.	18-32-23	2,070	br. sh. drlg.
Pattiway Oil Co., No. 1 Midway-Sunset, Kern Co.	12-11-24	1,729	flow. 70 b.d.
Zamloch, Carl, No. 2 Midway-Sunset, Kern Co.	22-32-23	2,073	sd. sh. drlg.
Hoyt, Otis, No. 5 Midway-Sunset, Kern Co.	7-11-23	2,027	flow. 150 b.d.
Quality Oil Co., No. 4 Bull, Midway-Sunset, Kern Co.	22-32-23	1,840	sd. sh. drlg.
Quality Oil Co., No. 5 Bull, Midway-Sunset, Kern Co.	22-32-23	1,600	sd. sh. drlg.
Honolulu Oil Corp., No. 17 Midway-Sunset, Kern Co.	14-32-24	2,780	pump. 240 b.d.
Honolulu Oil Corp., No. 18 Midway-Sunset, Kern Co.	14-32-24	3,250	sd. sh. drlg.
Iriquois Oil Co., No. 1 Midway-Sunset, Kern Co.	7-11-23	1,729	cmtd. 1,542
Petrolia Royalties, No. 1 Midway-Sunset, Kern Co.	21-32-22	1,110	sd. sh. drlg.
Buffalo Oil Co., No. 1 Tejon, Kern Co.	5-10-19	4,430	sd. sh. drlg.
Reserve Oil & Gas Co., No. 33-1 Tejon, Kern Co.	33-11-19	4,989	idle
Reserve Oil & Gas Co., No. 33-2 Tejon, Kern Co.	33-11-19	4,474	will test
Reserve Oil & Gas Co., No. 33-3 Tejon, Kern Co.	33-11-19	4,431	shut in
Ohio Oil Co., No. 2 Tejon, Kern Co.	21-11-19	6,810	sd. sh. drlg.
Western Gulf, No. 3 Cantua, Fresno Co.	3-17-15	8,530	cleaning out
Union Oil Co., No. 2 Kettleman North, Fresno Co.	29-21-17	8,500	milling 6,785
K. N. D. A., No. 4-18-J Kettleman North, Fresno Co.	18-21-17	9,400	P.B. 9,095
K. N. D. A., No. 36-28-J Kettleman North, Fresno Co.	28-21-17	7,470	sd. sh. drlg.
K. N. D. A., No. 65-28-J Kettleman North, Fresno Co.	28-21-17	6,100	br. sh. drlg.
K. N. D. A., No. 83-24-H Kettleman North, Fresno Co.	24-21-16	8,935	P.B. 8,882
K. N. D. A., No. 85-32-J Kettleman North, Fresno Co.	32-21-17	8,485	redrlg. 8,271
K. N. D. A., No. 63-34-J Kettleman North, Fresno Co.	34-21-17	5,882	br. sh. drlg.
K. N. D. A., No. 61-4-P Kettleman North, Fresno Co.	4-22-17	1,681	sd. sh. drlg.
Associated Oil Co., No. 3 Kettleman North, Kings Co.	35-21-17	8,858	cleaning out
Standard Oil Co., No. 8-19-J Kettleman North, Fresno	19-21-17	8,286	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.i., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporary abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Standard Oil Co., No. 85-19-J Kettleman North, Fresno	19-21-17	8,619	P.B. 8,240
Standard Oil Co., No. 38-33-J Kettleman North, Fresno	33-21-17	6,990	sd. sh. drlg.
Standard Oil Co., No. 78-3-P Kettleman North, Fresno.	3-22-17	6,191	sd. sh. drlg.
Tembior Oil Co., No. 1 Kettleman Middle, Kings Co. ..	25-23-18	5,935	cleaning out
Central Cal. Utilities, No. 3 Dudley, Kings Co.	11-23-19	1,221	cmtd. 778
Norell, T. G., No. 1 Tulare Lake, Kings Co.	7-21-21	6,179	resume work
Stone, G. S., No. 1 Tulare Lake, Kings Co.	25-20-20	1,101	sd. sh. drlg.
Associated Oil Co., No. 2 Avenal, Kings Co.	35-23-17	1,960	redrlg. 1,640
Barnsdall Oil Co., No. 1 K.C.L., San Luis Obispo Co. ..	1-32-20	754	sd. sh. drlg.
Calif. Producing Co., No. 1 Pattiway, San Luis Obispo.	19-10-24	751	sd. sh. drlg.
Aviation Oil Co., No. 1 Callender, San Luis Obispo Co..	10-11-35	1,930	hd. sd. drlg.
Union Oil Co., No. 1 Huasna, San Luis Obispo Co.	22-32-15	5,002	dry; abd.
Lewis, A. O., No. 1 Pecho, San Luis Obispo Co.	34-30-10	2,310	cleaning out
Martin, J. D., No. 4-A Pismo, San Luis Obispo Co.	5-32-13	3,262	cleaning out
The Texas Co., No. 1 Kings City, Monterey Co.	30-19- 7	1,093	sd. sh. drlg.
Shell Oil Co., No. 1 Pleyto, Monterey Co.	34-24-10	8,994	P.B. 8,750
Shell Oil Co., No. 2 Pleyto, Monterey Co.	34-24-10	6,960	sd. sh. drlg.
The Texas Co., No. 2 Eureka, Humboldt Co.	22- 3- 1	7,418	reaming
Amerada Pet. Co., No. 1 Mayhood, Rio Vista, Solano..	35- 4- 2	4,353	sd. sh. drlg.
Associated Oil Co., No. 1 Fargent, San Benito Co.	5-12- 4	6,382	cmtd. 6,382
Buttes Oilfields, Ltd., No. 1 Kent, Sutter Co.	2-15- 1	5,210	looks wet
Jennings, E. P., No. 1 Allenworth, Tulare Co.	4-24-23	2,709	P.B. 2,690

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Caminol Oil Co., No. 1 El Segundo, Los Angeles Co. ..	18- 3-14	7,310	cmtd.
Caminol Oil Co., No. 2 El Segundo, Los Angeles Co. ..	18- 3-14	7,254	cmtd. 7,227
Richfield Oil Co., No. 4 El Segundo, Los Angeles Co...	18- 3-14	7,535	cmtd. 7,400
The Texas Co., No. 2-1 El Segundo, Los Angeles Co. ..	17- 3-14	7,756	hd. sd. drlg.
The Texas Co., No. 1 Security, El Segundo, Los Angeles	18- 3-14	7,253	cmtd. 7,166
Republic Petroleum Co., No. 3 El Segundo, Los Angel s	18- 3-14	7,401	testing
Republic Petroleum Co., No. 4 El Segundo, Los Angeles	18- 3-14	7,260	sd. sh. drlg.
Republic Petroleum Co., No. 5 El Segundo, Los Angeles	18- 3-14	6,642	sd. sh. drlg.
Royalty Service Corp., No. 1 El Segundo, Los Angeles.	7- 3-14	7,200	sd. sh. drlg.
Union Oil Co., No. 1 El Segundo, Los Angeles Co.	18- 3-14	7,685	cmtd. 7,646
Leora Oil Co., No. 1 Hermosa, Los Angeles Co.	31- 3-14	4,675	sd. sh. drlg.
Bryan & Young, No. 1 Lawndale, Los Angeles Co.	20- 3-14	6,480	cleaning out
Signal Finance Co., No. 1 Hawthorne, Los Angeles Co.	10- 3-14	9,395	cleaning out
Imperial Gypsum, No. 1 Moneta, Los Angel s Co.	35- 3-14	7,209	idle
C. C. M. Oil Co., No. 15 Torrance, Los Angeles Co.	31- 3-14	3,100	P.B. 3,040
Two & One Oil Co., No. 6 Torrance, Los Angeles Co. ..	31- 3-14	3,653	sd. sh. drlg.
Willett, P. W., No. 1 Torrance, Los Angeles Co.	18- 4-14	3,083	cmtd. 3,070
Hunt Oil Co., No. 1 Torrance, Los Angeles Co.	18- 4-14	4,520	will P.B.
Abrams, John & Associates, No. 1 Torrance, Los Angeles	16- 4-14	4,068	reaming
Calmore Oil Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,225	sd. sh. drlg.
Sawyer Oil Co., No. 1 Torrance, Los Angeles Co.	18- 4-14	2,986	sd. sh. drlg.
McLaren & Associates, No. 1 Palos Verdes, Los Angeles	27- 4-14	3,992	reaming
Country Club Oil Co., No. 1 Inglewood, Los Angeles ..	19- 2-14	2,750	sd. sh. drlg.
Shell Oil Co., No. 4 Rubel, Inglewood, Los Angeles Co	8- 2-14	2,640	pump. 168 b.d.
Standard Oil Co., No. 82 Inglewood, Los Angel s Co. ..	8- 2-14	3,270	sd. sh. drlg.
Shell Oil Co., No. 89 Reyes, Dominguez, Los Angeles..	33- 3-13	6,682	sd. sh. drlg.
Shell Oil Co., No. 90 Reyes, Dominguez, Los Angeles..	33- 3-13	7,608	sd. sh. drlg.
Union Oil Co., No. 50 Callender, Dominguez, Los Angel	33- 3-13	9,601	sd. sh. drlg.
Union Oil Co., No. 52 Callender, Dominguez, Los Angeles	33- 3-13	3,890	sd. sh. drlg.
Union Oil Co., No. 43 Callender, Dominguez, Los Angeles	33- 3-13	6,583	sd. sh. drlg.
Union Oil Co., No. 9 Carson, Dominguez, Los Angeles..	33- 3-13	7,190	sd. sh. drlg.
Barnsdall Oil Co., No. 10 Rosecrans, Los Angeles Co...	20- 3-13	7,664	cmtd. 7,240
Shell Oil Co., No. 1 Rosecrans, Los Angeles Co.	20- 3-13	7,744	cleaning out
Hilton Oil Co., No. 1 Flood Control, Los Angeles Co...	11- 4-13	6,043	redrlg. 5,684
Union Oil Co., No. 16 D.R., Playa Del Rey, Los Angeles	27- 2-15	6,044	sd. sh. drlg.
Barnsdall Oil Co., No. 1 Newhall, Los Angeles Co.	26- 3-17	6,428	O.S. drlg.
Burt, A. G., No. 1 Newhall, Los Angeles Co.	36- 4-17	450	tech. spud
Holbrook Oil Co., No. 1 Newhall, Los Angeles Co.	28- 4-16	4,453	hd. sd. drlg.
Sclegna Oil Co., No. 3 Wilmington, Los Angeles Co. ..	33- 4-13	3,588	sd. sh. drlg.
General Pet. Corp., No. 2-E Wilmington, Los Angeles..	5- 5-13	2,629	O.S. drlg.
General Pet. Corp., No. 4-E Wilmington, Los Angeles..	5- 5-13	2,703	sd. sh. drlg.
General Pet. Corp., No. 1-F Wilmington, Los Angeles..	33- 4-13	2,901	sd. sh. drlg.
General Pet. Corp., No. 1 Ford, Wilmington, Los Angeles	4- 5-13	2,070	sd. sh. drlg.
General Pet. Corp., No. 2 Ford, Wilmington, Los Angeles	4- 5-13	1,891	sd. sh. drlg.
Getty Oil Co., No. 2 Wilmington, Los Angeles Co.	33- 4-13	3,550	flow. 600 b.d.
Getty Oil Co., No. 3 Wilmington, Los Angeles Co.	33- 4-13	2,523	sd. sh. drlg.
Brain, Cooper & Haney, No. 1 Wilmington, Los Angeles	33- 4-13	2,604	sd. sh. drlg.
Bankline Oil Co., No. 1-T Wilmington, Los Angeles ..	33- 4-13	3,106	sd. sh. drlg.
Bankline Oil Co., No. 1 C.Y., Wilmington, Los Angeles.	34- 4-13	1,696	sd. sh. drlg.
Bankline Oil Co., No. 7-1 Wilmington, Los Angeles ...	33- 4-13	3,517	pump. 198 b.d.
Wilmington O. & D. Co., No. 1 Wilmington, Los Angeles	33- 4-13	3,564	flow. 660 b.d.
Union Pacific R.R. Co., No. 1 Wilmington, Los Angeles	4- 5-13	2,412	sd. sh. drlg.
Union Pacific R.R. Co., No. 2 Wilmington, Los Angeles	4- 5-13	560	sd. sh. drlg.
Wilbur, V.R.G., No. 1 Wilmington, Los Angeles Co. ..	4- 5-13	3,592	sd. sh. drlg.
Sovereign Oil Co., No. 3 Wilmington, Los Angeles Co...	33- 4-13	3,625	pump. 175 b.d.
Pacific Western Oil, No. 1-P Wilmington, Los Angeles	33- 4-13	3,543	flow. 480 b.d.
Pacific Western Oil, No. 1-M Wilmington, Los Angeles	33- 4-13	3,585	C.P. 2,800
Royalty Service, No. 22-7 Wilmington, Los Angeles Co.	33- 4-13	2,532	sd. sh. drlg.
Royalty Service, No. 2-C Wilmington, Los Angeles Co..	5- 5-13	2,810	sd. sh. drlg.
Hall, F. C., No. 1 Wilmington, Los Angeles Co.	5- 5-13	2,530	sd. sh. drlg.
Gauthier Oil Co., No. 2 Wilmington, Los Angeles Co...	27- 4-13	3,470	sd. sh. drlg.
Drillers, Inc., No. 1 Whittier, Los Angeles Co.	22- 2-11	1,065	sd. sh. drlg.
Honolulu Oil Corp., No. 1 Puente, Los Angeles Co.	15- 2-10	3,452	gr. sd. drlg.
Richfield Oil Co., No. 2 Nutt, Montebello, Los Angeles	5- 2-11	5,856	water witch
Richfield Oil Co., No. 1 Estrada, Montebello, Los Angeles	5- 2-11	3,382	redrlg. 3,285
Universal Consd., No. 1-J Nutt, Montebello, Los Angeles	5- 2-11	7,145	P.B. 5,856
The Texas Co., No. 16 Baldwin, Montebello, Los Angeles	6- 2-11	5,050	sd. sh. drlg.
St. Helens Pet., No. 6 P. & B., Montebello, Los Angeles	5- 2-11	7,199	cleaning out
Union Oil Co., No. 26 Montebello, Los Angeles Co.	1- 2-12	3,640	sd. sh. drlg.
Hobbs Pet. Corp., No. 1 Long Beach, Los Angeles Co...	29- 4-12	2,960	cleaning out
Hathaway Co., No. 2 Fulton, Santa Fe Sps., Los Angeles	6- 3-11	4,650	redrlg. 3,650
Union Oil Co., No. 100 Santa Fe Springs, Los Angeles..	6- 3-11	10,100	sd. sh. drlg.
Julian & Criswell, No. 1 Walnut, Los Angeles Co.	5- 2- 9	1,350	hd. sh. drlg.
Petroleum Co., No. 5 Wilson, Huntington, Orange Co...	2- 6-11	3,852	sd. sh. drlg.
Re-Mine Oil Co., No. 2 Huntington, Orange Co.	2- 6-11	4,400	cmtd.
Richrow Oil Co., No. 2 Huntington, Orange Co.	34- 5-11	4,195	sd. sh. drlg.
Orco Oil Co., No. 5 Huntington, Orange Co.	2- 6-11	4,697	fish. D.P.
Commander Oil Co., No. 1 Newport, Orange Co.	29- 6-10	6,053	fish. D.P.
Fullerton Oil Co., No. 20 Brea, Orange Co.	2- 3-10	5,154	redrlg. 4,653
Standard Oil Co., No. 62 Emery, West Coyote, Orange.	13- 3-11	4,200	bailing
Bandini Petroleum Co., No. 1 East Coyote, Orange Co.	17- 3- 9	2,795	cleaning out
Dolicia Oil Co., No. 2 East Coyote, Orange Co.	24- 3-10	3,534	prod. test
Tide Water A. O. Co., No. 52 East Coyote, Orange Co..	13- 3-10	3,487	redrlg. 2,870
Graham & Loftus, No. 1 East Coyote, Orange Co.	18- 3- 9	4,326	pump. 120 b.d.
Standard Oil Co., No. 2-8 East Coyote, Orange Co.	22- 3-10	3,685	cleaning out
Shell Oil Co., No. 1 Mathis, Anaheim, Orange Co.	23- 4-10	4,243	sd. sh. drlg.
Joseph, Arthur, No. 1 Richfield, Orange Co.	29- 3- 9	2,251	sd. sh. drlg.
Principal Oil Co., No. 1 Richfield, Orange Co.	36- 3- 9	1,570	sd. sh. drlg.
Bachman Pet. Co., No. 1 Richfield, Orange Co.	29- 3- 9	3,810	cleaning out
Union Oil Co., No. 29 Chapman, Richfield, Orange Co.	30- 3- 9	8,610	fish. D.P.
Union Oil Co., No. 44 Chapman, Richfield, Orange Co..	29- 3- 9	3,460	sd. sh. drlg.
Union Oil Co., No. 45 Chapman, Richfield, Orange Co.	29- 3- 9	3,402	sd. sh. drlg.
Standard Oil Co., No. 2-24 Kraemer, Richfield, Orange	32- 3- 9	4,550	pump. 120 b.d.

KANSAS

Week Ending March 13 (Descriptions are East unless marked otherwise)

Barton County

John Burton No. 1 Wendel, NE cor. sec. 13-19-11w. Sil. 3,346 ft.; drlg. 3,374 ft.

C. L. Carlock et al No. 1 Leibel, SE NE SE sec. 18-18-11w. Anhy. 681 ft.; U.R. 12-in. at 685 ft.

George Dickey et al No. 1 Boger, SE SE NE sec. 15-16-13w. Cellar.

Duwe & Brouk No. 1 Baker, NE SE SW sec. 16-17-13w. Sil. 3,486 ft.; H.F.W. 3,491 ft.; T.D. 3,500 ft. D.&A.

Hendon Drlg. Co. and Morgan & Flynn No. 1 Robenseifer, C NW sec. 7-18-15w. S.D. 430 ft.

Indian Terr. Illm. Oil Co. No. 1 Schrapel, SE SE NE sec. 26-20-11w. S.S.O. 3,110-15 ft.; C.O. 3,190 ft.

S. L. Parks No. 1 Peach, SE cor. sec. 24-16-14w. Drlg. 1,950 ft.

C. L. Price et al No. 1 Kraft, SW NW NE sec. 10-17-11w. Drlg. 2,315 ft.

Stanolind O. & G. Co. No. 2 Burmeister, NE NE SW sec. 33-19-11w. Coring 3,355 ft.

E. F. Wakefield et al No. 1 Scheuerman, NE NE SW sec. 31-16-15w. Rig.

Ralph Wixson and Union O. & G. Co. No. 1 Frederick, NW cor. sec. 12-16-13w. R.U.

Butler County

A. M. Landon et al No. 1 McCaig, NE NE SE sec. 13-28-6. Drlg. 1,865 ft.

Rex & Morris No. 1 Gilmore, SE SE NE sec. 13-25-6. M.I. mch.

C. L. Seibel et al No. 1 Bisagno, SE SE NW sec. 24-25-6e. R.U. mch.

Vickers Pet. Co. No. 1 Voth, C N half NE NE sec. 32-24-4e. Loc.

Chase County

Propp et al No. 1 Fromm, SE cor. sec. 29-18-9e. Fsg. 2,440 ft.

Chautauqua County

Hugh & Wentz No. 1 Wells, SE SE NW sec. 10-33-10. M.I.M.

E. J. Shaffer No. 1 Nuckolls, NW cor. sec. 12-33-19. Drlg. 460 ft.

W. M. McKnab No. 1 Griffith, SW cor. sec. 11-32-10. R.U. mch.

Cowley County

Elmer Ash et al No. 1 Bolack, NW NW SE sec. 22-32-6. Cellar.

W. M. McKnabb No. 1 Community, C NE NW sec. 14-34-3e. O.W.D.D.; Chat, 3,390 ft.; S.S.O. 3,407 ft.; U.R. at 3,431 ft.

W. M. McKnabb No. 1 Weidschmidt, SW SW NW sec. 18-34-6e. U.R. at 2,478 ft.

Tom Palmer No. 1-A Lowe, SW SE SE sec. 3-32-5. Drlg. 75 ft.

Earl Wakefield et al No. 1 Knapp, SW SW NW sec. 2-34-5e. T.D. 3,161 ft.; acd.; bailed 3 B.O. and 2 B.W.; T.D. 3,217 ft.; D.&A.

Ryan Consolidated Co. No. 1 Couch, SW SW SE sec. 13-30-5. M.I.M.

L. H. Wentz and Amerada Pet. Corp. No. 1 Rush, NW SW SW sec. 36-34-6e. Drlg. 1,530 ft.

Decatur County

C. L. Bruce et al No. 1 Newbold, C NE SE sec. 34-2s-28w. Loc.

Winkler & Koch No. 1 Vessey, C NW SE sec. 26-3-26w. Topeka 3,415 ft.; K.C. 3,-460-3,826 ft.; S.D. 4,007 ft.

Ellis County

Empire O. & R. Co. No. 1 Hall, SE cor. sec. 2-12-17w. K.C. 3,235 ft.; drlg. 3,-360 ft.

Ted Kors et al No. 1 Koblitz, SE SW NW sec. 23-12-18w. Pay 3,694-98 ft.; swb. 48 B.O. and swbd. down; T.D. 3,699 ft.; P.B. 3,697½ ft.; acidized.

Lario O. & G. Co. et al No. 1 Cress, NE cor. sec. 13-11-17w. Sil. 3,301 ft.; Schlumberger test, showed possible K.C. production; R.U.S.T.

Mazda Oil Co. No. 1 Henderson, SW SW NE sec. 27-11-18w. R.U.

Murphy Oil Co. No. 1 Wiesner, SE SE SW sec. 12-14-19w. Howard 3,175 ft. (cor.); set 8-in. csg. 3,185 ft.; C.O.

Noble Pet. Corp. No. 1 O'Laughlin, NW NW SE sec. 13-12-19w. Drlg. 750 ft.

Sunray Oil Co. No. 1 Befort, NE cor. sec. 11-14-20w. Topeka 3,245 ft.; U.R. 6-in. 3,550 ft.

Earl Wakefield No. 1 Putnam Mortgage Co., SE SE NW sec. 32-15-17w. R.U.

Winkler & Koch No. 1 Jensen, SW SW NE sec. 3-13-18w. S.D. 80 ft.

Ellsworth County

Frost et al No. 1 Dolechek, NE NE SW sec. 36-14-8w. Anhy. 570 ft.; drlg. 660 ft.

Finney County

Keith & Olson Drlg. Co. No. 1 Ely, NW NW SW sec. 34-22-29w. Drlg. 3,553 ft.

Grant County

Columbian Fuel Co. No. 1 Gray, C SE sec. 3-29-35w. Est. 1,000,000 ft. gas at 2,590-2,618 ft.; drlg. 2,633 ft.

Greenwood County

L. S. Bolwanz No. 1 Travelers, C SW SW sec. 23-26-10. Spd.

Hollis et al No. 1 Boone, NW NE NE SW sec. 21-26-12. T.D. 1,130 ft.; D.&A.

Ohio Oil Co. No. 1 Schwab, SE SW SE sec. 9-24-10. Viola 2,763-66 ft., T.D.; 2,000 ft. O.I.H. in 48 hrs.; bailed 2½ B.O.P.H.

Harper County

Carter Oil Co. et al No. 1 Seihart Est., C SW NW sec. 4-34-8w. Set 15-in. csg. 293 ft.; W.O.C., 360 ft.

Harvey County

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w. Viola 3,695 ft.; Wilcox 3,711 ft.; fsg.

Haskell County

Kuhn Bros. et al No. 1 Meredith, C SW sec. 10-30-33w. O.W.D.D.; Bridge 2,520 ft.; C.O.

Kearny County

J. L. Murphy No. 1 Campbell, NW NW SW sec. 32-25-35w. Anhy. 1,900 ft.; set 7-in. csg. at 2,780 ft.; S.D.

J. L. Murphy No. 1 Masonic Home, C NW sec. 1-26-36w. M.I.M.

Kingman County

Shell Pet. Corp. No. 1 McMichael, C W½ W½ SW sec. 12-27-10w. Sil. 4,467 ft.; T.D. 4,535 ft.; D.&A.

Logan County

Rose Spring Drlg. Co. et al No. 1 Wright, C SE SE sec. 12-15-35w. Cmtd. cave 2,815 ft.; W.O.C.

Lyon County

Young et al No. 1-A Murphy, SE NW NE sec. 32-21-11. Fsg. 1,380 ft.

McPherson County

Bradley Bros. No. 1 Barnholt, SW SW SE sec. 30-20-5w. Spudded.

Fred C. Frank et al No. 1 Doles, SE NW NE sec. 12-19-1w. Spudded.

Hutchinson O. & G. Co. et al No. 1 Berg, SW SW SE sec. 15-20-3w. Drlg. 1,920 ft.

Smith et al No. 1 Larson, NW NW SW sec. 35-18-5w. M.I.M.

Wamhoff et al No. 1 Nuse, SE NE SW sec. 18-18-4w. R.U.R.

Mitchell County

Geo. Siedhoff et al No. 1 Greiss, SW SW SE sec. 16-8-10w. S.D. 2,200 ft.

Ness County

Jones & Lane No. 1 Page Milling Co., SE SE NW sec. 36-18-26w. M.I.M.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Topeka 3,510 (cor.); K.C. 3,852 ft.; H.F.W. 3,858-63 ft.; U.R. at 3,875 ft.

Pratt County

H. V. Elwell et al No. 1 Fay, NW NW SE sec. 15-27-14w. Whipstock 2,580 ft.; S.D.

Reno County

Atlantic Ref. Co. No. 1 Page, SE NW NW sec. 19-23-7w. K.C. 3,100 ft.; Chat 3,653 ft.; drlg. 3,664 ft.

Foraker et al No. 1 Hiett, SE SW NE sec. 34-24-4w. S.D. 3,930 ft.

Helmerick & Payne No. 1 Benson, NE cor. sec. 5-25-6w. Viola 4,088 ft.; Wilcox 4,130 ft.; Sil. 4,183 ft.; cd. 4,185-95 ft.; sulfur odor.

Helmerich & Payne et al No. 1 Evans, NE NE SE sec. 29-24-6w. Rotary rig.

Imo O. & G. Co. and others No. 1 Watkins, SE cor. sec. 14-22-7w. M.I.M.

Clyde Pulse No. 1 Payne, SW NW NE sec. 4-22-7w. Cong. 3,398 ft.; Chat 3,426 ft.; H.F.W. 3,440 ft., T.D.; cementing back to 3,416 ft.

Olson Drlg. Co. et al No. 1 Herriman, NW cor. sec. 22-24-8w. Rig.

Westgate-Greenland Oil Co. No. 1 O'Sullivan, SW SW NE sec. 24-23-5. Drlg. 500 ft.

Rice County

Bradley Oil Co. et al No. 1 Ginter heirs, NW cor. sec. 13-20-8w. Loc.

Buckley No. 1 Bailey, SW SW NW sec. 19-20-6w. S.D. 3,000 ft.

Continental Oil Co. et al No. 1 Michelis, NE NE SW sec. 12-18-8w. Set 7-in. csg. 3,202 ft.; R.U.S.T.

L. E. Douglass No. 1 Coyne, NE SE SE sec. 24-21-8w. S.D. 1,505 ft.

Empire O. & R. Co. No. 1 Banterton, SE SW SE sec. 11-18-8w. Sil. 3,246 ft. (cor.); T.D. 3,270 ft.; Pot. 268 B.O.; comp.

Hanna et al No. 1 Brothers, SE SE NW sec. 25-20-8w. U.R. at 2,815 ft.

John Hanna et al No. 1 Fulton, NW NW NE sec. 24-19-6w. Drlg. 780 ft.

T. C. Johnson No. 1 Shubert, SW cor. sec. 9-20-10w. Anhy. 474 ft.; drlg. 1,930 ft.

Manning & Martin et al No. 1 Mathes, SE SW NE sec. 27-21-8w. Drlg. 2,325 ft.

Fred Phillips et al No. 1 Hubenett, SW NW SW sec. 23-20-6w. R.U.

Roy Ramsey et al No. 1 Malone, NW NW NE sec. 1-20-10w. Drlg. 1,870 ft.

Skelly Oil Co. & Ewers Simpson Oil Corp. No. 1 Linville, SW NW NE sec. 2-20-10w. M.I.M.

C. E. W. Skiles et al No. 1 Helmer, NW NW NE sec. 7-19-8w. Cellar.

Union Oil & Refining Co. et al No. 1 Baker, SW SW NE sec. 33-20-6w. R.U.

W. E. Witt et al No. 1 Fair, NW SE SE sec. 4-22-8w. R.U.

Rooks County

Basin Oil Co. No. 1 Baza, NE cor. sec. 23-9-17w. S.D. 2,000 ft.

Buckner & Schoff No. 1 McConnel, NE cor. sec. 34-6s-18w. S.D. 2,645 ft.

Graham et al No. 1 Fike, SW cor. sec. 9-9-17w. T.D. 3,301 ft.

Jones Bros. No. 1 Wiss, NW cor. sec. 8-10-18w. Drlg. 50 ft.

J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. Fsg. 3,432 ft.

Snowden & McSweeney No. 1 Hindman, C E½ NW sec. 35-7s-17w. H.F.W. 3,180 ft., T.D.; P.B. to 3,123½ ft.

Rush County

S. A. Murphy et al No. 1 Roth, NW NW SW sec. 21-16-18w. Set 15-in. 445 ft.

Russell County

Empire O. & R. Co. No. 1 Vaughn, SW cor. sec. 17-14-14w. K.C. 3,015 ft.; T.D. 3,031 ft.; 2,000 ft. O.I.H.; flowing.

Equity Gas Co. No. 1 Harbaugh, NW NE SW sec. 19-13-12w. Set 10-in. csg. 789 ft. W.O.C.

Goldstein and Vernon Oil & Gas Co. No. 1 Steinert Estate, NE SE NW sec. 34-15-15w. M.I.M.

S. M. Murphy et al No. 1 Deines, SE SE SW sec. 36-15-15w. Loc.

Shields et al No. 1 Gross, NW NW SE sec. 5-15-13w. Loc.

Saline County

Ryan Consd. No. 1 Wuerth, SW SW NW sec. 28-14-2w. Fsg. 1,870 ft.

Sedgwick County

Cameron et al No. 1 Smith, SW SE SE sec. 13-27-2e. H.F.W. 2,480 ft.; set 8-in. 2,612 ft.; drlg. 2,614 ft.

Empire O. & R. Co. No. 1 Kimel, NW cor. sec. 4-29-2w. M.I.M.

Roxana Drlg. Co. et al No. 1 Woodman, SW NW SW sec. 26-26-1w. Set 12-in. csg. 74 ft.; W.O.C.

E. B. Shawyer No. 1 Furman, SW NE SE sec. 24-29-3w. M.I.M.

E. M. Swearer et al No. 1 Thome, SW SW NW sec. 19-28-1w. Drlg. 842 ft.

Stafford County

Empire Ref. Co. et al No. 1 Jordon, SW SW NW sec. 15-25-14w. Simp. 4,210 ft.; Sil. 4,252 ft.; T.D. 4,267 ft.; sulfur wtr.; P.B. acd.; Flowed 140 B.O. in 1½ hrs.

Empire O. & R. Co. No. 1 O'Connor, NE cor. sec. 17-24-15w. Sil. 4,083 ft.; T.D 4,129 ft.; drlg. cement.

Rose Spring Drlg. Co. et al No. 1 Gray, NW cor. sec. 11-24-13w. M.I.M.

J. E. Trigg and Vernon Oil & Gas Co. No. 1 Andrea, SE cor. sec. 4-23-12w. Set 12-in. csg. 190 ft.; W.O.C.

Sumner County

Graham et al No. 1 Dawson, NW NW NW sec. 4-33-2w. Drlg. 3,837 ft.

Olson Drlg. Co. et al No. 1 Barr, SE cor sec. 8-34-2w. B.R.R.

Orcott & Stewart No. 1 Newton, SE cor sec. 21-30-2. O.W.W.D.; S.D. 930 ft.

E. B. Shawver et al No. 1 Bryan, C W½ W½ SW sec. 36-30-2w. R.U.R.

Texas Co. No. 1 Harper, NE SW SE sec. 9-20-3w. Rot. rig.

C. H. Westfall et al No. 1 Rogers, SW NW SW sec. 35-31-2w. Cd. and drilled 3,842-52 ft.; drlg. 4,015 ft.

Trego County

Black Gold Oil Co. No. 1 Allman, C SW SW sec. 34-14-21w. Drlg. 3,287 ft.

Central Commercial Oil Co. No. 1 Burke, C SW sec. 15-11-22w. O.W.D.D.; T.D. 4,239 ft.; D.&A.

Woodson County

Harper et al No. 1 Weldle, SE SE NE sec. 10-24-14. Lime 1,623 ft.; drlg. 1,850 ft.

Reamer No. 1 Corn, NE cor. sec. 31-26-1e. Drlg. 1,820 ft.

C. L. Sheedy No. 2 Fulhage, C S½ NW SE sec. 27-25-14. Drlg. 1,435 ft.

Comanche County

E. B. Hane No. 1 Duper, NW cor. sec. 21-2n-13w. Mch.

Frank Scott No. 1-A Kuntz, SE NE SE sec. 21-4-11w. T.D. 2,210 ft.; S.D.

C. V. Morris No. 1 Young, SE NE SE sec. 24-3n-10w. T.D. 822 ft.; S.D.

Jefferson County

Buffalo Oil Co. No. 1 Crownover, SE SE NW sec. 21-6s-6w. Lime 1,571-1,604 ft., showing gas in top; drlg. 1,615 ft. in sh.

Dodson, Wells-Pierson No. 1 Key, SE SE NW sec. 6-8s-6w. Drlg. 2,060 ft.

Fields et al No. 1 Trout, NE NE SW sec. 5s-8s-7w. Drlg. 873 ft.

Gulf Oil Corp. No. 1 Woodworth, NW NW NE sec. 20-3s-4w. Loc.

Heenan & Coe et al No. 1 Rose, C SW SW sec. 1-5s-5w. Drk.

Massad & Swansberger No. 1 Barrett, NE cor. SE SE sec. 14-6s-6w. Sd. 1,530-34 ft.; S.O.; cored shale at 1,534-38 ft.; S.D.

Johnston County

Patton et al No. 1 McCrummens, SW SW NE sec. 16-1s-6e. T.D. 1,155 ft.; S.D.

Love County

W. H. Riddle et al No. 1 Johnson, C SW SE cor. sec. 20-8s-2w. T.D. 4,009 ft., waiting for tools; will deepen.

Sinclair Prairie Oil Co. No. 1 Stockton, SE SE SW sec. 26-6s-2w. T.D. 8,583 ft.; P.B. 6,927 ft.; fsg.

Marshall County

Stuart & Taylor No. 1 Chestnut, NE cor rec. 23-8s-5e. T.D. 803 ft.; S.D.

Murray County

Power Oil Co. et al No. 1 Lancaster Trust C SW NE sec. 10-1s-2e. T.D. 3,438 ft.; P.B. to 3,175 ft.; W.O.C.

J. Ben Russell No. 1 fee, SE SE NW sec. 9-2s-3e. Dry sd. 1,210 ft.; H.F.W. 1,210-35 ft., T.D.; U.R. at 1,100 ft.

Stephens County

William Angle No. 1 Posey, C NW NW sec. 8-1n-8w. Sd. showing oil, 4,148-51 ft.; Bk. sd., 4,245-50 ft.; showing gas; Granite Wash 4,410-46 ft.; T.D. 4,457 ft.; drill pipe parted and drk. pulled in.

Carter Oil Co. No. 1 Harley, C NE NE sec. 24-2s-4w. Broken sd. 3,182-96 ft.; cores showing oil and gas in several sands; drlg. 3,307 ft.

Jack Cohen No. 1 Pierce, NE NE NW sec. 24-2s-6w. T.D. 400 ft.; S.D. for fuel.

Coline Oil Co. No. 1 Johnson, SW SE NE NE sec. 1-2n-8w. T.D. 6,500 ft.; S.D.O.

H. J. Edwards No. 1 Frederick, SW cor. NE SE NW sec. 31-2n-8w. T.D. 2,754 ft.; S.L.M.; set csg. 2,716 ft.

Helmerich & Payne No. 1 Graham, SW SW NE sec. 12-1n-5w. Dry sd. 3,918-25 ft.; Bk. sd. 3,925-55 ft.; drlg. 4,270 ft.

B. F. Lundy No. 1 Calmes, NW SW sec. 35-1n-4w. T.D. 795 ft.; S.D. for repairs.

Ed Parson No. 1 Olson, C SW SW sec. 31-2-8w. Tstd. mud, wtr. and S.O.; sd odor oil and gas 6,856 ft.; T.D. 7,001 ft.; S.D.

Tillman County

Indian Terr. Ill. Oil Co. No. 1 Hatler, SW NE sec. 32-2s-17w. T.D. 5,169 ft.; P.B. to 4,525 ft.; to pump.

Lynn Oliver No. 1 Rilling, SE SE NW sec. 22-1s-15w. T.D. 1,387 ft.; dry granite wash; S.D.

Shirley Clum et al No. 1 Moricle, NW NW SE sec. 16-4s-14w. T.D. 2,775 ft.; S.D.

OKLAHOMA

Week Ending March 13

NORTHERN OKLAHOMA

Beckham County

Carter Oil Co. No. 1 Garrett, NE cor. sec. 11-7n-25w. Drlg. 1,275 ft., brown sh.

Mid-American Oil Co. No. 1-A Biscoe, SW cor. sec. 28-8-22w. Drlg. 385 ft.

Caddo County

Clyde Becker et al No. 1 Pharris, SE SE NW sec. 24-6-12w. Derrick cornera.

Cleveland County

W. R. Hollenbeck No. 1 Norman, NW NW NE sec. 17-9-2w. R.U.R.

Coal County

Buwoldt & Couch No. 1 McMillan, SW cor. sec. 10-1s-8. T.D. 1,343 ft.; lowering csg.

Creek County

J. E. Crosbie, Inc. & Sinclair Prairie Oil Co. No. 1 Bailey, NE NW NW sec. 28-15-7. Bart. 2,910-3,042 ft., H.F.W.; T.D. 3,055 ft.; repairing band wheel.

M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. S.D. at 2,935 ft.

Comoil Oil Co. et al No. 1 Hall, SW SW NE sec. 2-15-7. Dewey 1,230 ft.; drlg. 1,240 ft.

Garfield County

Arab Oil Co. No. 1 Harkendorf, NE cor sec. 34-20-3w. T.D. 2,702 ft.; hole 10 per cent off; P.B. 1,400 ft.; drlg. by at 2,350 ft.

Ohio Oil Co. No. 1 State, SW cor. sec. 13-23-3w. Loc.

Garvin County

Hayes Drlg. Co. No. 1 Howell, NW SE NW sec. 34-1-1. Rig.

Grady County

Western White Lily Oil Co. No. 1 Stover, SE SW NW sec. 33-3n-7w. T.D. 1,110 ft.; S.D. for pipe.

Harmon County

Lloalko Trust, Ltd. No. 1 Crosnoe, SE SE SW sec. 14-3n-25w. Dry Granite Wash 3,325-33 ft.; T.D. 3,363 ft. in shale; lost cir.; D.&A.

Penn State Oil Co. No. 1 Cole, C W½ SW NW sec. 21-2n-26w. Drk.

Hughes County

W. W. Bussett No. 1 Field, C NW SW sec. 11-9-11. S.D.

Carson Oil Co. No. 1 Lyter, NE NW SW sec. 31-8-12. Mayes, 4,400 ft.; Sycamore, 4,565 ft.; Woodford, 4,570 ft.; Hunton, 4,652 ft.; Sylvan, 4,660 ft.; Viola 4,709 ft.; Dense 4,765 ft.; Dol. 4,790 ft.; T.D. 4,802 ft.; to core.

Mid-Western Prod. Co. No. 1 Hill C SE NW sec. 13-9-9. 22,000,000 ft. gas at 2,884 ft.; dry sand, 2,890-2,904 ft.; T.D. 2,942 ft.; S.D.

C. J. Wrightsman No. 1-A Diamond, NE NE SE sec. 33-9-9. Wapa. 3,275 ft.; Crom. 3,285 ft.; drlg. 3,335 ft.

Kay County

G. A. Brown et al No. 1-A Harris, SW SW NE sec. 14-25-1e. Spudded.

Ritz Oil & Gas Co. No. 1 State, NW NE SW sec. 16-29-2w. Wood. 4,375 ft.; Wilcox 4,425 ft.; odor of oil and salty taste in cores; T.D. 4,449 ft.; ran Schlumberger.

Kiowa County

Argus Pet. Co. No. 1 Osborne, NW cor. NE sec. 9-7-16w. T.D. 1,225 ft.; fsg.

McWhirter & Francis No. 1 Padgett, NE NE NW SE sec. 3-5-17w. S.D. 610 ft.

Latimer County

Clark Drlg. Co. et al No. 1 Wilson, C SE SE sec. 15-5-18. Drlg. 3,575 ft.

Le Flore County

Lynch et al No. 1 Tidwell, C NW SE sec. 17-3-22. 10-in. 2,246 ft.; T.D. 2,340 ft.; S.D.

Lincoln County

Anderson-Prichard Oil Corp. No. 1 Colon, C N½ SE SW sec. 28-17-4e. Set 7-in. 4,300 ft.; bailed down 1,400 ft. and well cleaned itself; est. 5,000,000 to 8,000,000 ft. gas.; S.D. to R.U.S.T.

Logan County

Anthony & Marshall No. 1 Fruin-Eckman, SE SE SW sec. 4-16-1e. T.D. 4,959 ft.; S.D.

Harry Blackstock No. 1 Prince, SE NE SW sec. 11-17-3w. Osw. 5,275 ft. (cor.); Miss. 5,600 ft.; Wd. 5,778 ft.; Mi. 5,855 ft.; Hunton 5,857 ft.; drlg. 6,015 ft.

Helmerich & Payne et al No. 1 Ruck, C NE SE sec. 9-19-2w. Drlg. 1,870 ft.

Muskogee County

Frank Buttram et al No. 1 Robbins, SE SE NW sec. 20-15-20. H.F.W. 706 ft., T.D.; D.&A.

A. D. Spears et al No. 1 Robbins, NW cor. sec. 20-15-20. Turkey Mt. sd. 1,677-84 ft.; Arbuckle 1,710 ft.; T.D. 1,811 ft.; S.S.O.; S.D.

Noble County

Lincoln Oil Co. et al No. 1-A Neil, NE cor. sec. 15-23-2w. R.U.R.

Osage County

Norbla Oil Co. No. 1 Osage, NE NE SW sec. 13-23-6. T.D. 760 ft.; fsg.

Pawnee County

Forest Dev. Corp. No. 1 Greisel, C NW NE sec. 21-21-5. Pink lime 3,210 ft.; Bart. zone 3,224 ft.; cored saturation; T.D. 3,275½ ft.; bridge, 3,210 ft.; D.&A.

Forest Dev. Corp. No. 1 Markham, SW NE SE sec. 10-21-5e. Drlg. 240 ft.

Payne County

Bill Riddle No. 1 Van Zandt, NW NW SE sec. 16-18-3e. Cellar and pits.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. T.D. 5,165 ft.; S.D. for drill pipe.

Pontotoc County

E. H. Moore et al No. 1 Muse, SW NE SE sec. 33-2n-7. Bromide 4,570 ft.; drlg. 4,595 ft.

L. K. Sandback et al No. 1 Whittaker, NW NE SE sec. 21-4-6. Cellar.

Pottawatomie County

Champlin Ref. Co. No. 1 Buckler, SE NE NE sec. 7-6-4e. Drlg. 1,700 ft.

Mid-Continent Pet. Corp. No. 1-A Logan, NE NE SE sec. 31-11-5. Drlg. 1,235 ft.

B. H. Rowlett et al No. 1 Burson, SW SW NE sec. 21-9-4e. Loc.

Pushmataha County

Erle Halliburton et al No. 1 Bagwell, SW NE NE sec. 30-3s-15e. T.D. 840 ft.; set 13-in. 773 ft.

Seminole County

Amerada Pet. Corp. et al No. 1 Fore A, SW cor. sec. 12-9-7. Drlg. 3,280 ft.

J. E. Hall et al No. 1 White, SE NW SE sec. 30-6-8. Senora 1,265-85 ft.; saturation; drlg. 2,190 ft.

J. H. Hudson et al No. 1 Tanyan, SE SE SW sec. 32-10-7. Drlg. 480 ft.

R. M. Purcell No. 1 Gilliland, SE SE SW sec. 24-11-7. Loc.

Sinclair Prairie Oil Co. No. 1 Rossanna, NW NW SW sec. 28-10-8. Gilcrease 3,170 ft.; Wapa. 3,368 ft.; Cd. to 3,405 ft., T.D.; set 9-in. 3,380 ft.; W.O.C.

Papoose Oil Co. No. 1 Yarber, SW SW NW sec. 15-11-8. Gil. 3,380 ft.; Cromwell 3,582 ft.; T.D. 3,615 ft.; D.&A.

Texas County

Cabot Carbon Co. No. 1 Castro, C NE sec. 19-3n-17ecm. Drlg. 2,356 ft.

Missouri Valley Gas Corp. No. 1 well, C sec. 17-6n-14ecm. Rig.

Washita County

John Koberg No. 1 Harms, NW NW NE sec. 6-10-16w. Drk.

L. P. McWhirter No. 1 fee, SW cor. sec. 34-8-19w. T.D. 1,754 ft. S.D.

SOUTHERN OKLAHOMA

Atoka County

A. J. Sanders No. 3 Redden, SE SW SW sec. 19-1n-15e. T.D. 1,275 ft. in sand; S.O.; to move in rotary.

Carter County

Helmerich & Payne No. 1 Wolverton, SE NE NW sec. 21-3s-1w. Loc.

Lyle-Wham Dev. Co. No. 1 Jackson, NE SW SW sec. 26-5s-1e. T.D. 881 ft.; S.D.O.

Choctaw County

Cooper & Branstetter No. 1 Bell, C NW NE sec. 29-6s-17. T.D. 1,151 ft. (cor.); S.D.

ARKANSAS

Grant County

Wallace & Staples No. 1 W. F. Davis, SE SE NW sec. 23-6-15. Jnkd. first hole; drlg. 2,370 ft.

Hempstead County

Birdwell et al No. 1 Duckett, SW NW SW sec. 24-13-24. S.D. 125 ft.; M.I.R.

Root Pet. Co. No. 1 Lucey, E. Drake, SE SE NW sec. 24-14s-24w. Drlg. 2,925 ft.

Shephert & Todd et al No. 1 Smith, NW SW SE sec. 11-11-25. T.D. 600 ft.; S.D. fuel.

Lafayette County

Carl B. King Drlg. Co. No. 1 Eben H. Woolcott, NE cor. sec. 36-19-26. 12-in. cmtd. 488 ft.; W.O.C.S.

A. M. Neeley No. 1 Meek, NE NE NW sec. 35-19-25. S.D. 3,159 ft.

Little River County

M. E. Sanderson No. 1 Pinning, sec. 6-13-30. S.D. 500 ft.

Joe Strahan No. 1 Dierks, SW SE sec. 21-12-28. Drlg. 2,012 ft.

Miller County

Nivia Oil Corp. No. 1 M.&P. Bank, NE SE, SE sec. 18-15-26. R.U.

Nevada County

Benedum & Trees No. 1 Block, NE NE SE sec. 9-14-20. T.D. 5,012 ft.; claim S.O.; W.O.

Benedum & Trees No. 2 C. C. Fincher SW SW NE sec. 10-14-20. T.D. 1,260 ft.; W.O.S.R.

Benedum & Trees No. 3 C. C. Fincher, sec. 10-14-20. T.D. 2,160 ft.; W.O.S.R.

Benedum & Trees No. 4 C. C. Fincher, SE SW NE sec. 10-14-20.

Benedum & Trees No. 4 Grove, SE SW NW sec. 10-14-20. Drk.

Benedum & Trees No. 7 Grove, NW SW NW sec. 10-14-20. T.D. 2,192 ft.; P.B.

Benedum & Trees No. 8 Grove, SW SW NW sec. 10-14-20. T.D. 2,173 ft.; tstg.

Benedum & Trees No. 9 Grove, NE NE SW sec. 10-14-20. R.U.

Benedum & Trees No. 1 Mary Jackson NE NW NE sec. 9-14-20. T.D. 2,134 ft.; W.O.S.R.

Benedum & Trees No. 2 Mary Jackson, SE NE NE sec. 9-14-20. Drk.

Benedum & Trees No. 1 A. R. Mitchell, SE SW SE sec. 4-14-20. Loc.

Berry Asphalt No. 1 W. Haynie, NE NE SW sec. 6-14-20. Loc.

Berry Asphalt Co. No. 2 J. Haynie, NE SE SW sec. 6-14-20. Loc.

J. C. Buckbee No. 1 Wortham, SW SW NW sec. 29-13-21. T.D. 2,340 ft.; T.A.

Hall & Briscoe No. 5 Ritchie, 100 ft. N No. 2, sec. 10-14s-20w. Drk.

A. M. Lacy No. 1 H. C. Bennett, SW SE sec. 24-14s-22w. Drk.

John R. Lewis No. 1 W. Haynie, SW SW NE sec. 5-14-20. T.D. 1,169 ft.; arng. drill deeper.

Walter Lowd No. 1 T. S. Grayson, SW SW SE sec. 12-14-20. 10-in. cmtd. 104 ft.; W.O.C.S.

W. E. Stewart No. 1 Mendenhall, con. SE NW NE sec. 1-14-20. 10-in. cmt. 104 ft.; R.U.R.

Steel & Warmack No. 1 Wm. Haynil, SE SE NW sec. 6-14-21. T.D. 1,183 ft.; W O.S.R.

G. H. Vaughn No. 1 Christopher, SW SW SE sec. 3-14-20. R.U.

Ouachita County

J. D. Reynolds No. 2 P. C. Grayson, Lot 4, Blk. 10, Stephens Sur., sec. 21-15-19. Bailing; T.D. 1,508 ft.

Pope County

Arkansas-La. No. 1 Smith, sec. 10-8n-21w. Drlg. 4,580 ft.

Sevier County

C. J. Benkley No. 1 Luther Tabler, NW NE SE sec. 14-10s-29w. R.U.

Union County

Dietrich et al No. 1 Aaronson, NE SW NE sec. 3-18-16. R.U. and W.O.

Lion Oil No. 1 Morgan, sec. 18-18-17. O.W. D.D. (formerly Phillips Pet. Co.); drlg. 5,187 ft.

Fenn-Ark. Corp No. 1 W. N. Raulston 330 ft. S and E, NW NW SE sec. 12-17-14. Cg. oil sd.; arg. set csg.; 7-in. cmtd. 2,980 ft.; T.D. 2,983 ft.; W.O.C.S.

S. H. A. Oil Corp. No. 1 H. D. Warren, NE SW SW sec. 10-17-14. Drlg. out cmt 3,342 ft. and W.O.S.R.; T.D. 3,342 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo-Rodessa

J. W. Anson No. 1 N. S. Spearman, NW SE sec. 14-23-15. T.D. 2,460 ft.; S.D. W.O.

Gulf Oil No. 1 Campbell, C sec. 4-23-16. Drk.

J. Edw. Jones No 2-B Sharp, NW C sec. 4-23-16. R.U.

J. Edw. Jones No. 4-A Sharp, SE C sec. 4-23-16. R.U.

Lion Oil Rfg. No. 1 Holm, NW SE SE sec. 9-23-15. 16-in. cmtd. 106 ft.; W.O.C.S.

Lyons & Neely No. 1 Noel, SE cor. sec. 8-23-15. T.D. 6,086 ft.; tstg.

Lyons & Neely No. 2 Noel, SW SE SE sec. 8-23-15. Drlg. 5,552 ft.

Magnolia Pet. Co. No. 11-A Caddo Lvy. Bd., SW cor. sec. 21-23-16. T.D. 5,920 ft.; D.S. stk.; fsg.

R. W. Norton No. 1 L. C. Harden, NE sec. 20-23-16. Drlg. 5,471 ft.

R. W. Norton No. 1 Payne, C SE SE sec. 27-23-16. Cg. 8,450 ft.

R. W. Norton No. 3 Starke, 660 S and W C sec. 16-23-16. Comp.; flw. 36 bbls. in 4 hrs.; T.D. 5,994 ft.

Standard Oil of La. No. 1 Armistead Comm., SW SW SE sec. 4-23-16. Drlg. 5,821 ft.

Standard Oil of La. No. 2 Armistead Comm., SE SE SW sec. 4-23-16. Drlg. 5,785 ft.

Standard Oil No. 2 J. R. Harden, NE NW NE sec. 16-23-16. 7-in. cmtd. 5,973 ft.; T.D. 5,988 ft.; W.O.C.S.

Standard of La. No. 1 Emma J. Parker, NE SE NW sec. 9-23-16. Comp.; flw. 367 B.P.D.; T.D. 6,013 ft.

Standard No. 1 W. M. Terry, SE NE SW sec. 9-23-16. Loc.

United Gas No. 6 fee 574, SW NE NW sec. 16-23-16. Loc.

United Gas No. 1-A Mitchell, 656 ft. N and W, SE cor. sec. 17-23-16. Cg. 5,910 ft.

United Gas Co. No. 4 W. M. Mitchell, NW cor. sec. 20-23-16. 7-in. cmtd. 5,875 ft.; T.D. 5,935 ft.; W.O.C.S.

United Gas Co. No. 27 Rodessa O. & L.

Co., NE NW sec. 15-23-16. Acidizing; T.D. 5,993 ft.

United Gas No. 5 Young, NW sec. 27-23-16. Drlg. 3,688 ft.

N. LOUISIANA WILDCATS

Bienville Parish

Lide & Greer No. 1 Smelley, 220 ft. N. 10 ft. W. SE SW NE sec. 13-16-5. Drlg 1,674 ft.

McDowell et al No. 1 Locke, NE cor. sec 9-15-10. Drlg. 2,370 ft.

Seaboard No. 1 McGee, 660 ft. N and E C sec. 3-16-3. T.D. 7,315 ft.; gauging.

Bossier Parish

Arkansas-La. No. 1 R. Hardeman, SE cor. sec. 6-17-11. Drlg. 4,100 ft.

Arkansas-La. No. 1 Tom Wilson, SW sec 8-17-11. Drlg. 2,610 ft.

La. Pet. Corp. et al No. 1 Edwards Est., NW SW sec. 5-17-11. 7-in. cmtd. on bottom; T.D. 5,187 ft.; W.O.C.S.

Haynes Drlg. Co. No. 1 A. J. Murff, NE SE sec. 35-17-12. Drlg. 4,370 ft.

Producers O. & G. No. 1 R. Johnson, NE sec. 5-17-11. Drlg.

Tidwell et al No. 1 Natting, sec. 15-22-14. T.D. 2,954 ft.; S.D.

Triangle Drlg. Co. No. 1-I Skannal, NE cor. sec. 22-17-12. T.D. 5,170 ft.; tstg.; est. 5,000,000 ft. gas.

Triangle No. 2 Ross Unit, NW SW NW sec. 23-17-12. Drlg. 2,293 ft.

Triangle No. 1-H Skannal, SE SW sec. 23-17-12. Rng. 7-in. csg.; T.D. 5,166 ft.

United Gas No. 1 H. G. Freeman, NE cor. sec. 15-17-12. Comp.; est. 20,000,000 ft. gas; T.D. 4,380 ft.

United Gas No. 1 Henderson, NE cor sec. 36-17-12. Drlg. 4,387 ft.

United Gas No. 1-H A. C. Skannal, NE SE sec. 26-17-12. T.D. 5,144 ft.; prep. acid.

United Gas No. 1-I Skannal, SW SW sec. 25-17-12. R.U.

United No. 1-A Webb, C sec. 23-17-12. R.U.

Caddo Parish

Bayou State Oil No. 10-B Jolly, SE NE NE sec. 21-22-15. 6-in. cmtd. 987 ft.; W.O.C.S.

E. L. Butt and Sam Hill No. 1 Caddo Lvy. Bd., C sec. 8-20-16. 10-in. cmtd. 40 ft.; W.O.C.S.

W. D. Chew No. 3 Rives, NE sec. 5-20-16. R.U.

W. D. Chew No. 4 U. S. Govn., NW sec. 5-20-16. Drlg.

Paul Cooper No. 1 Rodgers, NW SW SW sec. 11-20-15. T.D. 2,215 ft.; W.O.S.R.

W. D. Chew No. 3 U. S. Govt., NW sec. 5-20-16. S.W.; abd.; T.D. 956 ft.

C. C. Chews No. 3 Pender, SW NW SW sec. 11-20-15. Drlg. 450 ft.

Custer Oil Co. No. 1 Wemple, N½ NW sec. 14-20-15. S.D. 1,650 ft.; rig rep.

DeMaggo et al No. 1 Huckaby, SE NE SE sec. 26-22-16. T.D. 1,137 ft.; tstd. dry; arg. D.D.

Gulf Ref. Co. No. 1 E. P. Hatcher, 660 ft. N and E, SW cor. SE¼ sec. 11-17-15. Drlg. 8,997 ft.

W. J. Hunter et al No. 1 Stoer, NW SW NE sec. 10-15-15. Loc.

Juan et al No. 1 Clara Hobbs, SW NW NW sec. 28-21-15. Cg. 1,535 ft.

B. F. Laney No. 1 Taylor, SW SE SW sec. 17-21-14. Tstg. 912 ft.

F. L. Luckett No. 1 Connell, SW NE sec. 10-20-15. 6-in. cmtd. 2,174 ft.; T.D. 2,208 ft.; blg. to test.

Morefield & Prine No. 3 Stokeley, sec. 5-20-16. Comp.; blowing by air 5 bbls. oil 25 S.W.; T.D. 957 ft.

Prairie River Synd. No. 1 Hutchinson, SW NW sec. 15-15-12. R.U. to D.D.; old T.D. 7,377 ft.; T.A. as dry hole.

Robson Oil Properties, Inc., No. 1 Cupples-NE sec. 24-16-13 (formerly Falcon Oil Co.). Rng. to bottom; T.D. 4,001 ft.

Rodgers et al No. 1 Thompson, NW SW SW sec. 11-20-15. Cg. 2,210 ft.

Simplex Oil No. 10-A Youree. Comp.; 500,000 ft. gasser T.D. 1,888 ft.

P. A. Singlust No. 2 Starr-Brown, SE sec. 28-20-16. Drlg. 1,530 ft.

Stanolind No. 117 Dillon, NE SE sec. 14-21-15. Comp.; pmp. 50 B.P.D.; T.D. 1,683 ft.

Stanolind O. & G. No. 118 Dillon, SE sec. 14-21-15. 7-in. cmtd. 1,413 ft.; W.O.C.S.

Stanolind O. & G. No. 119 Dillon, SE NE sec. 14-21-15. R.U.

J. J. Thompson No. 1 Gamm, NE SW NW sec. 35-21-15. Tstg. S.W.; S.D.; T.D. 2,225 ft.

Claiborne Parish

Lisbon Oil Co. No. 1 J. W. Burgess, NE SE NE sec. 3-20-5w. Drlg. 4,420 ft.

Lyons & Neely No. 1 H. E. Patton, NE NW SW sec. 36-21-5w. Drlg. 4,038 ft.

Max Hirsch et al No. 1 C. O. Ferguson, 2,640 ft. N, 1,000 ft. E. SW cor. sec. 29-22-6w. T.D. 6,147 ft.; D.&A.

Ray P. Oden No. 1 W. H. Patton, SW SE SE sec. 36-21-5w. Drlg. 4,591 ft.

Red Iron Drlg. Co. No. 1 H. E Patton, S½ SW NE sec. 36-21-5w. Drlg. 4,230 ft.

Standard Oil of La. No. 1 Baker, 660 S&E NW sec. 27-19n-7w. 9-in. cmtd. 3,167 ft.; T.D. 3,175 ft.

United Gas et al No. 1 W. Brown, sec. 1-19-6. D.S. 5,600-5,839 ft.; S.G. and S.W.; tstg.

De Soto Parish

Benedum & Trees No. 1 Clifton, NE NW sec. 33-13-12. Drlg. 2,835 ft.

Chamberlin et al No. 1 Lanier, 280 ft. N and E. SW NE sec. 29-11-11. R.U.

Fite No. 1 Ramsey, NW sec. 36-11-11. T.D. 2,800 ft.; T.D. 3,027 ft.; D.&A.

Gulf Ref. Co. No. 36-A Jenkins, SE cor. sec. 2-12-12. Arg. set 7-in.; T.D. 2,389 ft.

Lee Oil Co. No. 1 Mansfield, SE sec. 13-10-14. Loc.

Peral Oil Co. No. 1 Joyner, SE NW SW sec. 28-11-12. Cmtd. 8-in. 2,885 ft.; T.D. 2,897 ft.; prep. tstg.

Rio Rajo Oil Co. No. 7 Prudhomme, SE cor. sec. 20-12-11. Drlg. 2,500 ft.

Sellers et al No. 2 Jenkins, 330 ft. S and W, NE SE NW sec. 35-13-12. S.D. 2,503 ft.; fuel.

R. M. Sundby No. 1 A. P. Garland, NW SW sec. 7-14-14. Drlg. 3,780 ft.

Grant Parish

Natchitoches Oil Co. No. 1 Simpson, sec. 12-7-7 (formerly reported in error as abd.). Now rebldg. drk.

Tri State Lse. & Dev. Co. No. 1 Edenborn Est., NE SE SE sec. 13-7-4w. T.D. 3,000 ft.; S.D.

LaSalle Parish

Lee Oil Corp. No. 1 Tullos, 150 ft. S and W NE NE sec. 26-10-1e. T.D. 1,529 ft.; prep. run csg.

Urania O. & G. Co. No. 1 Urania, NW sec. 7-10-2. T.D. 1,403 ft.; rng. csg.

Morehouse Parish

So. Carbon Co. No. 3 Miles, NE sec. 36-21-4e. R.U.

Ouachita Parish

H. L. Woods No. 1 Union, NE sec. 17-19-3e. R.U.

H. L. Woods No. 2 Union Power, SE sec. 17-19-3e. Loc.

United Gas No. 2 Morris, SE sec. 36-19-3e. Loc.

United Carbon No. 7 Neston, NE cor. sec. 32-19-4e. Cmt. 6-in. 2,187 ft.; W.O.C.S.

Red River Parish

Gulf No. 39 E. T. Robinson, NW cor. sec. 25-13-11. Drlg. 790 ft.

Urania Oil Co. No. 1 DeLong, 330 ft. S and E. C sec. 23-12-10. Fsg. 2,800 ft.

Richland Parish

Gulf Ref. Co. No. 15 R. R. Rhymes et al, sec. 32-17-6e. Drlg. 9,720 ft.

Sabine Parish

Earl F. Fox No. 1 Blankenship, NE SE NW sec. 13-9-12. S.D. sh.; T.D. 3,412 ft.

Kirk-Green-Way Inc. No. 1 Whitney Corp., NW NE sec. 8-9-13. Drlg. out cmt. 1,880 ft.

Power Oil Co. No. 1 Belton, 990 W. 330 S NE sec. 31-9-13w. 6-in. cmt. 1,660 ft.; W.O.C.S.

Prod. O. & G. Co. No. 1 Edwards Est., SE NW SW sec. 29-9-13. T.D. 1,530 ft.; arng. run csg.

Prod. O. & G. Co. No. 1 Lynch, SW NE SW sec. 29-9-13. Pumped off; acid.; T.D. 1,608 ft.

Willis & Dowden No. 1 Lynch, SW NE SW sec. 29-9-13. T.D. 1,608 ft.; arg. tst.

Union Parish

Interstate Natl. Gas Co. No. 63 fee, SE sec. 3-21-3e. R.U.

So. Carbon Co. No. 17 Grayling, SW cor. sec. 21-21-4e. R.U.

So. Carbon No. 18 Grayling, SE cor. sec. 20-21-4e. Loc.

W. L. Woods No. 2-B Frost Lbr., NW sec. 16-21-3e. Loc.

Webster Parish

W. H. Bass Drlg. Co. No. 1 T. Crichton, C NW NW sec. 21-20-9. Loc.

Magnolia No. 2 D. G. Cox, SW SE NE sec. 22-21-10. Drk.

Ohio Oil Co. No. 1 S. P. D. Coyle, NW SE SW sec. 23-21-10. Cg. 5,570 ft.

Ohio Oil Co. No. 2 R. M. Coyle, SE sec. 22-21-10. Drlg. 1,835 ft.

Ohio Oil Co. No. 2 A. H. Gray Acct. No. 2, NW sec. 26-21-10. Tstg. 5,559 ft.

Ohio Oil Co. No. 2 A. J. Hodges, NE NW SW sec. 23-21-10. 7-in. cmtd. 5,587 ft.; T.D. 5,595 ft.

L. R. Skidmore No. 1 Barnett, NE NW SW sec. 29-17-9. Drlg. 2,565 ft.

Standard Oil Co. of La. No. 1 E. Firdeckier, 1,320 ft. E. 1,316 ft. S. NW cor. sec. 2-17n-9w. Perf. csg. and tstg.; old T.D. 7,202 ft.

United Gas No. 2 Davis, 660 ft. S and E. NW cor. sec. 23-21-10. Drlg. 8,555 ft.

United Gas No. 1 Mixon, SE SW sec. 22-21-10. T.D. 8,231 ft.; W.O.

Woodley Pet. Co. No. 4-B Gray, NE NE sec. 27-21-10. T.D. 5,595 ft.; will D.D.

SOUTH LOUISIANA FIELDS

Ansela Butte—St. Martin Parish

Stanolind O. & G. Co. No. 1 Patin, sec. 46-9s-5e. 13⅜-in. csg. 1,514 ft.; T.D. 5,430 ft. (cor.); P.B. 2,658 ft.; T.D. 6,147 ft.; D.S. stuck.

Bayou Bouillion—Iberville Parish

S. C. Yingling No. 1-A State, sec. 13-9s-8e. T.D. 3,272 ft.; oil sd.; rng. csg.; P.B. 1,550 ft.

Bayou Cocotrix—Terrebonne Parish

Shell Pet. Corp. No. 1 Pelican, sec. 35-17s-15e. Driving piling; bldg. road.

Bayou Mallett—Acadia Parish

Superior Oil Prod. Co. No. 5 Breelley, sec. 52-7s-1e. Drlg. sdy. sh. 6,820 ft.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 37 Watkins, sec. 8-12s-12w. R.U.

Cankton—St. Landry Parish

Superior Oil Prod. Co. No. 1 Brasseaux, sec 24-8s-3w. Drlg. clay 112 ft.

Charenton—St. Mary Parish

Pan American Prod. Co. No. 3 Laws Realty Co., sec. 25-13s-9e. Drlg. sh. 2,230 ft.

Pan American Prod. Co. No. 1 South Coast Corp., sec. 30-13s-10e. S.D. 6,934 ft.; high wtr.

Choctaw—Iberville Parish

Standard Oil Co. No. 9 Myrtle Grove, sec. 53-9s-11e. T.D. 3,455 ft.; P.B. 3,160 ft.; to sdtrk.

Cameron Meadows—Cameron Parish

Burton Sutton Oil Co. No. 16 Sch. Ld., sec. 16-14s-13w. Set 10¾-in. csg.; T.D. 4,851 ft.; P.B. 3,650 ft.; W.O.C.

Burton Sutton Oil Co. No. 18 School Ld., sec. 16-14s-13w. Drk.

Magnolia Pet. Co. No. 19 Cameron Meadows, sec. 16-14s-13w. T.D. 4,714 ft.; recvd. 2,500 ft. of P.L.O. on D.S.T.; 9⅝-in. csg. 4,694 ft.; P.B. 4,708 ft.; blew out, caught fire, bridged; rig up.

Darrow—Ascension Parish

Humble O. & R. Co. No. 4 Community, sec. 33-2e. Drlg. sh. 6,320 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 4 State, sec. 5-22s-16e. T.D. 5,342 ft.; sdtrkd. at 5,185 ft.; T.D. 6,147 ft.; P.B. and sdtrkd.; drlg. sd. and sh. 6,802 ft.

Four Isle—Terre Bonne Parish

Texas Co. No. 8 State, Drlg. sh. and sd. 9,200 ft.

Fausse Point—Iberia Parish

Texas Co. No. 2 State, sec. 35-11s-8e. 7-in. csg. 6,444 ft.; cd. salt 7,151-57 ft.; 1,021 ft. of 4½-in. csg. 7,157 ft.; perf. csg. 6,303-6,553 ft.; flwg. 13 B.P.D. by heads through ⅝-in. ck.

Garden Island—Plaquemines Parish

Texas Co. No. 23 State, sec. 37-23s-33e. 18⅝-in. csg. 541 ft.; top salt 5,933 ft.; T.D. 5,965 ft.; S.D.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 17 O. H. Castle, sec. 14-9s-8w. T.D. 7,046 ft.; 7-in. csg. 7,046 ft. I.P. 616 B.P.D.; ½-in. ck.

Fohs Oil Co. No. 1 First Natl. Bank, sec. 13-9s-8w. R.U.

Texas Co. No. 13 Nickerson, sec. 1-9s-8w. Drlg. sh. 1,325 ft.

Union Sulphur Co. No. 12 Barbe, sec. 1-9s-8w. T.D. 9,101 ft.; blew out; caught fire; cratered; cleaning up after blowout.

Union Sulphur Co. No. 13 Barbe, sec. 1-9s-8w. T.D. 6,735 ft.; oil sd.

Union Sulphur Co. No. 14 Barbe, sec. 1-9s-8w. Bldg. drk.

Union Sulphur Co. No. 7 Castle, sec. 14-9s-8w. Drlg. sdy. sh. 851 ft.

Union Sulphur Co. No. 4 Kaufman, sec. 12-9s-8w. Loc.

Union Sulphur Co. No. 12 Powell Lbr. Co., sec. 12-9s-8w. R.U.

Hackberry—Cameron Parish

W. T. Burton No. 1 Kennedy, sec. 22-12s-10w. Drk.

W. T. Burton No. 1 Rosella Vincent, sec. 22-12s-10w. Drlg. sh. 3,950 ft.

Gulf Oil Corp. No. 23 Erwin, sec. 12-12s-10w. R.U.

Independent Oil Co. No. 1 Sanner, sec. 29-12s-10w. T.D. 1,775 ft.; 5-in. csg. 1,775 ft.; swbd. S.W.

Stanolind O. & G. Co. No. 6 Carter, sec 22-12s-10w. T.D. 4,225 ft.; 7-in. csg. 4,205 ft.

Stanolind Oil & Gas Co. No. 1 J. H. Duhon, sec. 27-12s-10w. Drlg. sdy. sh. 4,406 ft.

Stanolind O. & G. Co. No. 25-B Gulf Land fee, sec. 15-12s-10w. R.U.

Stanolind O. & G. Co. No. 1 Little, sec. 28-12s-10w. Drk.

Stanolind O. & G. Co. No. 1 M. J. Muller, sec. 23-12s-10w. 7⅝-in. csg. 4,617 ft.; drlg. sh. 5,731 ft.

Stanolind O. & G. Co. No. 18 School Land, sec. 16-12s-10w. Drlg. sh. and sd. 5,530 ft.

Sutton Joint Interest No. 1 Ellender, sec. 22-12s-10w. Drlg. sd. and L. 3,439 ft.

Texas Co. No. 20 State, sec. 12-12s-10w T.D. 7,989 ft.; perf. csg. 7,626-45 ft.; tstg.

Union Sulphur Co. No. 42 Watkins, sec 13-12s-10w. T.D. 2,990 ft.; 7-in. csg. 2,981 ft.; swbd. dry; pulling lnr.; abd.

Iowa—Jefferson-Davis Parish

Shell Pet. Corp. No. 22 Heyd, sec. 13-9s-7w. T.D. 1,201 ft.; cg. sd. 4,419 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 2 Barrilleaux, sec. 59-13s-8e. Drlg. sh. 2,146 ft.

Herton Oil Co. No. 5 Carter, sec. 38-13s-9e. 10¾-in. csg. 1,495 ft.; drlg. sh. 5,852 ft.

Teche Oil Co. No. 1 Eaves, sec. 70-13s-9e. T.D. 6,707 ft.; abd.

Teche Oil Co. No. 1 LeBourgeois, sec. 59-13s-8e. Drlg. 45 ft.

Jennings—Acadia Parish

A. C. Glassell et al No. 1 J. Trusel, sec. 42-9s-2w. Drlg. sh. 5,583 ft.

Lake City Oil Co. No. 2 Jennings Synd., sec. 46-9s-2w. T.D. 3,990 ft.; P.B. and sdtrkd.; drlg. 3,857 ft.

T. C. Markly No. 1 Gourney, sec. 42-9s-2w. T.D. 4,280 ft.; P.B. 1,300 ft.; W.O.C.

Shell Pet. Corp. No. 2 Community, sec. 40-9s-2w. T.D. 7,185 ft.; 7-in. csg. 7,181 ft.; T.D. 7,390 ft.; redrlg.

Stanolind O. & G. Co. No. 18 Houssiere-Latrielle, sec. 47-9s-2w. 8⅝-in. csg. 5,358 ft.; drlg. sd. 5,589 ft.

Superior Oil Prod. Co. No. 2 Eunice-Crowley, sec. 12-9s-2w. Drk.

Superior Oil Prod. Co. No. 1 Iowa-Jennings sec. 41-9s-2w. T.D. 6,489 ft.; 7-in. csg. 6,489 ft.; I.P. 711 B.P.D.; 14/64-in. ck.

Superior Oil Prod. Co. No. 2 Jennings-Heywood, sec. 41-9s-2w. Loc.

Superior Oil Prod. Co. No. 2 Leckcit, sec 42-9s-2w. Drlg. sh. 7,021 ft.

Lafitte—Jefferson Parish

Texas Co. No. 6 Lafitte, sec. 20-17s-24e. T.D. 1,771 ft.; lost returns; moved drlg. barge 135 ft. N of first hole; drlg. sdy. sh. 8,243 ft.

Texas Co. No. 6 Rigolettes, sec. 39-17s-24e. T.D. 9,456 ft.

Texas Co. No. 1 State-Bayou Norman, sec. 28-17s-24e. Dredging canal.

Lake Barre—Terrebonne Parish

Texas Co. No. 37 Lake Barre-State. Drlg. sd. 10,816 ft.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 6 LaFourche, sec. 11-8s-25e. Drlg. sd. 5,600 ft.; no report.

Lake Pelto—Terrebonne Parish

Texas Co. No. 15 State, sec. 17-23s-16e. Drlg. sd. 6,944 ft. No report.

Leesville—Lafourche Parish

Gulf Oil Corp. No. 1-A City of New Orleans, sec. 35-21s-22e. T.D. 5,831 ft.; D.S. stuck.

Texas Co. No. 59 L.L.&E., sec. 27-21s-27e. Drlg. sh. 3,630 ft.

Texas Co. No. 62 Leesville, sec. 29-17s-24e. T.D. 3,508 ft.; rng. cg. test; no report.

Lockport—Cameron Parish

Magnolia Pet. Co. No. 6 Freeberg, sec. 9-10s-9w. Drk.

New Iberia—Iberia Parish

Wm. Hellis No. 7 Bernard, sec. 54-12s-7e. Drlg. sdy. sh. 3,481 ft.

Wm. Hellis No. 4 Boliver, sec. 56-12s-7e. Drlg. 1,637 ft.

Wm. Helis No. 4 Bullock & Burke, sec. 25-12s-7e. T.D. 4,505 ft.; P.B. and sdtrk.; T.D. 4,401 ft.; P.B. and sdtrkd.; T.D. 4,548 ft.; 7-in. csg. 3,722 ft.

Wm. Hellis No. 3 Schwing, sec. 57-12s-7e. T.D. 885 ft.; R.U. heavy rig.

Texas Co. No. 3 Bryant, sec. 25-12s-7e. Bldg. road.

Texas Co. No. 1 Dohoe, sec. 26-12s-7e. Drlg. sdy. L. 4,531 ft.

Texas Co. No. 5-B Hanzen, sec. 54-12s-7e. Drk.

Port Barre—St. Landry Parish

Pan American Prod. Co. No. 3 Cormier, sec. 4-6s-5e. Abd. 7,213 ft.

Roanoke—Jefferson Davis Parish

Shell Pet. Corp. No. 6 Kratzer, sec. 13-9s-4w. 10¾-in. csg. 2,454 ft.; T.D. 9,143 ft.; P.B. 8,881 ft.; perf. csg. 8,850-56 ft.; I.P. 711 B.P.D.; ¼-in. ck.

Sorrento—Ascension Parish

Pan American Prod. Co. No. 8 United Land, sec. 22-10s-4e. Drlg. sh. 3,920 ft.

Sorrento Oil Co. No. 1 Bernard, sec. 9-19s-14e. S.D. 6,262 ft.

Tri-State Dev. Co. No. 1 Duplessis, sec. 69-10s-2e. Drk.

Starks—Calcasieu Parish

J. R. Turnbull No. 1 Industrial Lbr. Co., sec. 20-9s-12w. S.D. 6,433 ft.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 840 fee, sec. 39-9s-10w. Drlg. sh. and L. 3,477 ft.

Union Sulphur Co. No. 841 fee, sec. 39-9s-8w. T.D. 4,456 ft.; 7-in. csg. 4,436 ft.; P.B. 4,440 ft.; tstd. S.W.; sdtrkng. 4,195-4,210 ft.; T.D. 4,644 ft.; I.P. 720 B.P.D.; 32/64-in. ck.

Union Sulphur Co. No. 842 fee, sec. 29-9s-10w. T.D. 5,475 ft.; P.B. and sdtrkd.; drlg. sh. 2,775 ft.

Tepetate—Acadia Parish

Continental Oil Co. No. 9-A Homeseekers Dev. Co., sec. 29-7s-2w. T.D. 8,323 ft.; P.B. to sdtrk. at 2,354 ft.; drlg. sh. 7,397 ft.

Continental Oil Co. No. 3 Johnson, sec. 30-7s-2w. Drlg. sh. 6,880 ft.

Continental Oil Co. No. 3 P. W. Miller, sec. 28-7s-2w. Drlg. sh. 6,185 ft.

Continental Oil Co. No. 4 P. W. Miller, sec. 28-7s-2w. Drk.

Continental Oil Co. No. 1 M. F. Ortego, sec. 30-7s-2w. Drlg. sh. 7,386 ft.

Valentine—Lafourche Parish

Pan American Prod. Co. No. 2 Harang, sec. 8-17s-20e. T.D. 6,962 ft.; I.P. 15 B.P.H.; ½-in. ck.

Pan American Prod. Co. No. 3 Harang, sec. 8-17s-20e. Drlg. sh. 5,500 ft.

White Castle—Calcasieu Parish

Shell Pet. Corp. No. 4 Shingle, sec. 12-11s-12e. T.D. 8,903 ft.; P.B. 8,717 ft.; drill pipe stuck.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. S.D. 5,047 ft.; washing to bottom.

Humble O. & R. Co. No. 1 Nordyke, sec. 23. 9⅝-in. csg. 6,843 ft.; cg. 8,893 ft.

Allen Parish

Humble O. & R. Co. No. 3 Bel, located in cratered hole, sec. 26-6s-7w. 10¾-in. csg. 165 ft.; T.D. 2,870 ft.; 7-in. csg. 2,766 ft.; shot well; failed to stop flwg. S.W.; S.D.

Avoyelles Parish

Coastal Mineral Dev., Inc., No. 1 Purdy-Hess, sec. 25-2n-3e. Drk. abd.

George Conover No. 1 Purdy-Hess, sec. 36-2n-3e. Drk.

Frost Oil Co. No. 1 Hines Lumber Co., sec. 3-3n-4e. Drk.

Calcasieu Parish

D. D. Oil Co. No. 1 Lutcher Moore, sec. 11-8s-13w. Drlg. sh. 8,150 ft.

Cameron Parish

Magnolia Pet. Co. No. 1-A Dobbortins, sec. 9-15s-14w. R.U.

Pure Oil Co. No. 1 Mallard Bay, sec. 39-

13s-3w. 18¾-in. csg. 1,499 ft.; 9⅝-in. csg. 7,906 ft.; T.D. 10,146 ft.; drill stem stuck; P.B. 6,923 ft.; perf. csg. 5,945-55 ft.; tstd. dry.

Southern Sulphur Co. No. 2 State, sec. 39 15s-10w. S.D. 1,410 ft.

Union Sulphur Co. No. 1 J. O. Hebert sec. 18-12s-8w. T.D. 6,746 ft.; D.S. stk.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Vingnes, sec. 48 8s-2e. T.D. 6,690 ft.; D.S. stuck.

Evangeline Parish

Belle Chenney Springs Oil Co. No. 1 Belle Springs Land Dev. Co., sec. 10-2s-1w. S.D. 1,723 ft.

Continental Oil Co. No. 1 Pardee Lbr. Co., sec. 18-4s-1w. Drlg. sdy. sh. 4,252 ft.

La. Crusader Oil Co. No. 1 Hattie Haas sec. 2-3s-5e. T.D. 7,506 ft.; abd.

East Feliciana Parish

Barnett Pet. Corp. No. 1 Tullis, sec. 34 2s-1w. S.D. 6,140 ft.

East Feliciana Oil No. 1 West & Budding sec. 37-1s-1w. Spudded 15 ft. and S.D.

Iberia Parish

Jefferson Lake Oil Co. No. 414 State Lake Pigneur, Twp. 12s-5e. Top salt 990 ft. set 10¾-in. csg. 5,095 ft.; top oil sd. 6,815 ft.; 7-in. csg. 6,930 ft.; perf. csg. 6,930-40 ft.; flwd. 10 bbls. of fluid per hr.; some S.W.; made squeeze job and retesting.

Jefferson Parish

Louisiana Crusader Oil Corp. No. 1 Langley, sec. 36-7s-5w. Loc.

Triangle Oil Co. No. 1 Conroe, sec. 1 12s-11e. T.D. 2,461 ft.; drill stem stuck

Jefferson Davis Parish

Shell Pet. Corp. No. 1 Joe Sturdivant sec. 25-10s-4w. 10¾-in. csg. 2,616 ft 7-in. csg. 8,630 ft.; drlg. plug.

Stanolind O. & G. Co. No. 1 Calcasieu Natl. Bank, sec. 28-7s-3w. T.D. 9,19[illegible] ft.; blew out, hole bridged; cutting and pulling stuck D.S.

Stanolind O. & G. Co. No. 1 United Lbr. Accident Co., sec. 16-11s-5w. 13⅜-in. csg. 2,142 ft.; W.O.C.

Lafourche Parish

Fohs Oil Co. No. 1 State Lake, sec. 8[illegible] 17s-19e. 26-in. csg. 20 ft.; drlg. sh. 2,-315 ft.

Wm. Heils No. 1 City of New Orleans sec. 19-23s-23e. Drlg. sdy. sh. 6,604 ft.

Livingston Parish

Coastline Oil Co. No. 1 Addison Trust Co. sec. 7-7s-3e. Drlg.

Plaquemines Parish

Gulf Oil Corp. No. 1 Bay-Adams, sec. 35-32s-19. Drlg. 3,710 ft.

Tide Water Oil Co. No. 2 Manhattan Fruit Co., sec. 34-21s-22e. Cd. sd. showing oil 6,429-38 ft.; T.D. 7,272 ft.; fsg.

Rapides Parish

R. D. Webb No. 1 A. M. Brasher, sec. 22-4n-2w. Cg. sh. 2,812 ft.

St. Bernard Parish

Gulf Oil Corp. No. 1 Lake Lery, sec. 28-14s-14e. Drlg. sh. 5,316 ft.

Southern Sulphur Co. No. 2 State Lake-Borgne, sec. 38-14s-15e. 13⅜-in. csg. 303 ft.; drlg. sh. 2,430 ft.

St. Charles Parish

Amerada Pet. Corp. and La. Ld. & Expl. Co. No. 1 State, sec. 13-15s-20e. Loc.

St. Landry Parish

Shell Pet. Corp. No. 1 Boagni, sec. 48-8s-4e. Spudded.

St. Martin Parish

Texas Co. No. 9 St. Martin, sec. 21-8s-7e 18⅝-in. csg. 106 ft.; drlg. sh. 8,551 ft.

Texas Co. No. 3 State, sec. 14-10s-9e 18-in. csg. 101 ft.; drlg. sd. 325 ft.

St. Mary Parish

Texas Co. No. 1 Horse Shoe Bayou, sec. 40-17s-9e. T.D. 10,975 ft.; rng. 7-in. csg.

Texas Co. No. 1 State-Bateman Lake, sec. 21-16s-12e. Drlg. sd. and gravel 878 ft.

Terrebonne Parish

Humble O. & R. Co. No. 1 H. J. Ellender sec. 23-19s-19e. 9⅝-in. csg. 8,735 ft.; drlg. sh. 10,209 ft.

Vermilion Parish

Continental Oil Co. No. 1 O. C. Hebert, sec. 20-12s-3e. T.D. 11,732 ft.; circulating with mud; well tried to blow out; fsg for stuck D.S.; hole cleaned to 10,680 ft.; set cmt.; P.B. to 10,800 ft.; sdtrkd. at 10,800 ft.; T.D. 12,216 ft., 5-in. csg. 11,795 ft.; flowed est. 5,000,000 ft. of dry gas per day through ¼-in. ck.; C.P. 3,950 lbs.; T.P. 3,500 lbs. Tubing and csg. sanded up; recovered tubing; milled bit off of 5-in. csg. at 11,975 ft.; fsg. for drill collar and bit at 11,795 ft.; failed to recover bit; P.B. 11,169 ft.; perf. csg. 10,368-76 ft.; swbd.; no shows of oil or gas; P.B. 7,682 ft.; perf. csg. 7,666-75 ft.; flwd. gas; sanded up; re-cmtg.

West Feliciana Parish

Cavalier Oil Co. No. 1 C. W. Mackie, sec. 59-3s-2w. Drlg. sh. 1,150 ft.

TEXAS

Week Ending March 13

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 3-X A. T. McCasland, W. C. White Sur. T.D. 1,157 ft.; run sur. csg.

Humble O. & R. Co. No. 14 L. R. Sherwood, W. C. White Sur. Drlg. sh. 3,-260 ft.

Humble O. & R. Co. No. 18-X R. W. Thompson, W. C. White Sur. T.D. 4,100 ft.; 5½-in. csg. 4,053 ft.; I.P. 10 B.P.H.; ¼-in. ck.

Humble O. & R. Co. No. 19 R. G. Paine, W. C. White Sur. T.D. 4,117 ft.; I.P. 456 B.P.D.; ¼-in. ck.

Hastings—Brazoria County

Coastwied Oil Co. No. 1 Brown, Blk. 12, B.B.B.&C. Sur. T.D. 6,080 ft.; 7-in. csg. 6,055 ft.; tstg.

Frost, Lowery & Goldston No. 1 Cecil Brown, center Lot 12, B.B.B.&C. Sur. Spudded.

Humble O. & R. Co. No. 1-B Brown, Perry & Austin Sur. T.D. 6,130 ft.; 5½-in. csg. 6,129 ft.; I.P. 19 B.P.H.; ¼-in. ck.

Humble O. & R. Co. No. 3-B Brown, Perry & Austin Sur. Loc.

Humble O. & R. Co. No. 8-A Brown, Wm. Snyder Sur. Drlg. sh. 4,875 ft.

Humble O. & R. Co. No. 1 King, H.T.&R. Sur. T.D. 6,080 ft.; 5½-in. csg. 5,976 ft.

Humble O. & R. Co. No. 1 C. M. Moody, Blk. 11, B.B.B.&C. Sur. Drlg. sh. 1,-720 ft.

Navarro Oil Co. No. 2 Callahan, Lot 5, H.T.&B. Sur. No. 29. Loc

Navarro Oil Co. No. 1 Callahan, Lot 6, H.T.&B. Sur. No. 29. Loc.

Albert Plummer No. 1 A. W. Brown, C Lot 74, Perry & Austin Sur. R.U.

South Gulf Oil Corp. No. 1 M. L. Gann, C of 10-ac. blk., Blk. 21, H.T.&B. Sur. No. 29. 10¾-in. csg. 1,800 ft.; T.D. 6,080 ft.; I.P. 621 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 3-A Avitts, H.T.&B. Sur. No. 29. Loc.

Stanolind O. & G. Co. No. 2 Blount, H.T.& B. Sur. No. 29. 10¾-in. csg. 1,664 ft.; drlg. L. 3,978 ft.

Stanolind O. & G. Co. No. 3 Brown, H.T. &B. Sur. No. 29. Loc.

Stanolind O. & G. Co. No. 1 Condon, H. T.&B. Sur. No. 29. T.D. 6,085 ft.; I.P. 632 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 2 Condon, Lot 11, H.T.&B. Sur. No. 29. Loc.

Stanolind O. & G. Co. No. 2 T. C. Edwards, Wm. Henry Sur. Drlg. sh. 5,-617 ft.

Stanolind O. & G. Co. No. 3 Law, H.T.&B. Sur. No. 36. Loc.

Stanolind O. & G. Co. No. 2 Long, H.T.&B. Sur. No. 29. R.U.

Stanolind O. & G. Co. No. 1 A. C. McKibben, H.T.&B. Sur. No. 29. R.U.

Stanolind O. & G. Co. No. 2 McKibben, Lot 16, H.T.&B. Sur. No. 29. Loc.

Stanolind O. & G. Co. No. 1 Miller, H.T.& B. Sur. No. 29. T.D. 6,080 ft.; 7-in. csg. 5,625 ft.; I.P. 402 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 3 Surface, B. B.B.&C. Sur. 10¾-in. csg. 1,660 ft.

Stanolind O. & G. Co. No. 8 Williams, A. C.H.&B. Sur. No. 1 Drlg. sh. 2,537 ft.

Lockridge—Brazoria County

Gulf Oil Corp. No. 1 Fred Reiss, J. W. Hall Sur. T.D. 8,164 ft.; rng. 7,000 ft. of 9⅝-in. csg.; P.B. to 2,400 ft.; sdtrkd.; drlg. 4,734 ft.

Gulf Oil Corp. No. 1 Carrie Baker, J. W. Hall Sur. No. 68. Drlg. sd. showing oil 6,326 ft.

Shell Pet. Corp. No. 2 Ramsey State farm, J. W. Hall Sur. No. 68. T.D. 6,365 ft.; making D.S.T.

Gulf Oil Corp. No. 1-A G. L. Wood et. al., Thomas Alsberry Sur. No. 4 Abst. No. 2. R.U.

Gulf Oil Corp. No. 3 Wilkes Smith, J. W. Hall Sur. R.U.

Manvel—Brazoria County

Burton Drilling Co. No. 1 J. Kroll, center Lot 101, A.C.H.&B. Sur. No. 92. R.U.

R. Olsen No. 2 Nichols, H. N. Little Sur. Drk.

E. A. Stone No. 1 Nichols, E. Little Sur. Drk.

Texas Co. No. 15 Belcher, H. N. Little Sur. T.D. 4,081 ft.; 7-in. csg. 4,063 ft.; I.P. 15 B.P.H.; ¼-in. ck.

Texas Co. No. 24 Houston Oil Field Ass. Lot 16, A.C.H.&B. Sur. Drlg. gbo. and L. 1,570 ft.

Texas Co. No. 1-B O. L. Rash, T. Spraggins Sur. Drlg. sd. 4,030 ft.

West Columbia—Brazoria County

Texas Co. No. 15 Abrams, George Tenille Lge. Sur. 10-in. csg. 1,156 ft.; drlg. sh. 3,996 ft.

Heyser—Calhoun County

Humble O. & R. Co. No. 6 Elizabeth Welder, J. Maria Rios Sur. Loc.

Humble O. & R. Co. No. 5 E. H. Welder, J. M. Rios Sur. R.U.

Humble O. & R. Co. No. 8-A P. H. Welder, J. M. Rois Sur. T.D. 5,475 ft.; comp.; no gauge.

Humble O. & R. Co. and Plymouth Oil Co. No. 12-B P. H. Welder, A. Sisneros Sur. Drk.

Portilla Drilling Co. No. 4-C P. H. Welder, A. Sisneros Sur. 10¾-in. csg. 975 ft.; T.D. 5,483 ft.; I.P. 10½ B.P.H.; ⅛-in. ck.

Portilla Drlg. Co. No. 12-C P. H. Welder, A. Sisneros Sur. Drk.

Anahuac—Chambers County

Gulf Oil Corp. No. 5 W. Knowles, sec. 48, H.&T.C. Sur. T.D. 7,080 ft.; I.P. 23 B. P.H.; ¼-in. ck.

Gulf Oil Corp. No. 2 Pommer, sec. 40, H &T.C. Sur. R.U.

Gulf Oil Corp. No. 3 G. C. Wilcox, sec. 48, H.&T.C. Sur. T.D. 7,080 ft.; I.P. 668 B.P.D.; ¼-in. ck.

Gulf Oil Corp. No. 7 Knowles, W. T. Knowles Sur. R.U.

Gulf Oil Corp. No. 4 G. C. Wilcox, W. T. Knowles Sur. R.U.

Humble O. & R. Co. No. 10 Broussard-Hebert, sec. 59, H.&T.C. Sur. Drlg. sh. 4,352 ft.

Humble O. & R. Co. No. 11 Broussard-Hebert, sec. 59, H.&T.C. Sur. Loc.

Humble O. & R. Co. No. 12 J. E. Broussard, sec. 63, H.&T.C. Sur. Drk.

Humble O. & R. Co. No. 12-B White, J. McGahey Sur. Drlg. sh. 1,290 ft.

Humble O. & R. Co. No. 2 Broussard, sec. 63, H.&T.C. Sur. 9⅝-in. csg. 1,256 ft.; orlg. L. 6,717 ft.

Humble O. & R. Co. No. 8 Engles, sec. 50, H.&T.C. Sur. T.D. 7,075 ft.; 5½-in. csg. 7,050 ft.; I.P. 389 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 7 Grippon, sec. 51, H.&T.C. Sur. T.D. 7,064 ft.; I.P. 577 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 12 Grippon, H.& T.C. Sur. No. 51. Loc.

Humble O. & R. Co. No. 11-B White, J. McGahey Sur. T.D. 7,137 ft.; I.P. 205 B.P.D.; ¼-in. ck.

Navarro Oil Co. No. 1 E. Drought, H.&T.C. Sur., sec. 46. T.D. 7,082 ft.; 7-in. csg. 7,064 ft.

Sun Oil Co. No. 24 White, J. McGahey Sur. Drlg. L. rock 4,584 ft.

Cotton Lake—Chambers County

Kirby Pet. Co. No. 1 W. D. Haden, Chambers Co. Sch. Ld. Sur. T.D. 6,607 ft.; abd.

Salt Dome Oil Co. No. 1-C Lawrence, S. Barrow Sur. Drlg. sh. 3,840 ft.

Seabreeze—Chambers County

Sun Oil Co. No. 1-A White, J. G. White Sur. No. 128. O.W.D.D.; T.D. 9,055 ft.; cmtd. back to 8,343 ft.; 7-in. csg. 8,290 ft.; drlg. plug.

Sun Oil Co. No. 1-B White, Wm. Mays Sur. 18⅝-in. csg. 1,226 ft.; T.D. 8,949 ft.; rmg.

Big Creek—Fort Bend County

Gulf Oil Corp. No. 74 T. W. Davis, M. Young Sur. T.D. 2,926 ft.; I.P. 26 B.P. H.; ⅝-in. ck.

Jenal Oil Co. No. 3 Bryan et al., M. Young Sur. T.D. 3,632 ft.; making sur.

Blue Ridge—Fort Bend County

Texas Gulf Prod. Co. No. 15 Blakely, E. Drews Sur. T.D. 3,949 ft.; making sur.

Telshaw-Reese and Echelson No. 1 Blakely, E. Drew Sur. Drk.

Boling—Fort Bend County

Crosby et al No. 1 H. R. Farmer, J. Scott Sur. R.U.

Mack Hank Oil Co. No. 3-B J. R. Farmer, J. Scott Sur. Drlg. sh. 3,195 ft.

Mack Hank Oil Co. No. 4-C E. C. Farmer, J. Scott Sur. Drlg. sh. 3,524 ft.

Mack Hank Oil Co. No. 5-C E. C. Farmer, J. Scott Sur. Loc.

Orchard—Fort Bend County

Gulf Oil Corp. No. 49 J. M. Moore, Germain Immg. No. 8. 13⅜-in. csg. 2,522 ft.; drlg. sh. 5,138 ft.

Gulf Oil Corp. No. 51 Moore, Mark Smith Sur. T.D. 2,410 ft.; making cg. test.

High Island—Galveston County

Stanolind O. & G. Co. No. 1-B Cade, H. Denman Sur. Drlg. sh. and L. 4,022 ft.

Stanolind O. & G. Co. No. 61 Cade, N. Fitzsimmons Sur. Drk.

Dickinson—Galveston County

Atlantic O. & Ref. Co. No. 1 G. O. Andersen, P. G. Merritt Sur. T.D. 220 ft.; W.O.C.

Coast Pet. Corp. No. 5 Maco Stewart, W. K. Wilson Sur. T.D. 8,838 ft.; I.P. 770 B.P.D.; ¼-in. ck.

Coast Pet. Corp. No. 6 Maco Stewart, W. K. Wilson Sur. Loc.

Diadem Oil Corp. of Texas No. 2 W. J. Way, F. P. Epperson Sur. Drk.

Diadem Oil Corp. of Texas No. 1 Pauline Frederick. Loc.

Humble O. & R. Co. No. 1-C Bayou Development Co., J. Sellers Sur. Drlg. sh. 5,851 ft.

Humble O. & R. Co. No. 15-A Maco Stewart, W. K. Wilson Sur. Loc.

Humble O. & R. Co. No. 16-A Maco Stewart, W. K. Wilson Sur. Drlg. sh. 6,940 ft.

Pure Oil Co. No. 4 J. W. Shelor, G. W. Banks Sur. Drlg sd. and L. 5,925 ft.

Pure Oil Co. No. 1 Sealy Hutchings, P. G. Merrett Sur. 10¾-in. csg. 1,826 ft.; drlg. sh. 7,176 ft.

Sinclair Prairie Oil Co. No. 1 W. Weems, W. K. Wilson Sur. Loc.

Stanolind O. & G. Co. No. 1 Dameani, W. K. Wilson Sur. Drlg. sh. 3,438 ft.

Greens Lake—Galveston County

Sun Oil Co. No. 7 Hughes, sec. 26, W. C. M. Baker Sur. T.D. 4,181 ft.; P.B. to 2,747 ft.; 7-in. csg. 2,712 ft.

Silsbee—Hardin County

Humble O. & R. Co. No. 1 Mrs. M. L. Kirby, G. W. Brooks Sur. Loc.

Republic Prod. Co.-Houston Oil Co. No. 6 Brooks, G. W. Brooks Sur. 10¾-in. csg. 1,500 ft.; T.D. 6,961 ft.; 7-in. csg. 6,-944 ft.

Republic Prod. Co.-Houston Oil Co. No. 8 Brooks, G. W. Brooks Sur. 10¾-in. csg. 1,587 ft.; oil sd. 6,808-15 ft.; T.D. 6,970 ft.; 7-in. csg. 6,950 ft.; W.O.C.

Clinton—Harris County

Stanolind O. & G. Co. No. 1 D. A. Oates, C. Martinez Sur., Abst. 543; 9⅝-in. csg. 6,771 ft.; T.D. 8,006 ft.; 7-in. csg. 8,-000 ft.

Mykawa—Harris County

West Prod. Co. No. 10 W. H. Irwin, W. B. Walker Sur. Drk.

Pierce Junction—Harris County

Hamil & Smith No. 3 Saunders, B.B.B & C. Sur. Drlg. sh. 3,300 ft.

Rio Bravo Oil Co. No. 30-A Settegast, P. H. Kopinan Sur. Drlg. sh. and L. 2,-610 ft.

South Houston—Harris County

Stanolind O. & G. Co. Drlg. Dist. No. 16. 9⅝-in. csg. 1,474 ft.; abd. 4,820 ft.

Stanolind O. & G. Co. Drlg. Dist. No. 28. 5⅝-in. csg. 1,441 ft.; T.D. 4,701 ft.; abd.

Stanolind O. & G. Co. No. 6 First Natl. Bank, Callahan and Vince Sur. Drlg. sh. 2,964 ft.

Stanolind O. & G. Co. No. 2 Green, H.T. &B. Sur. No. 6. R.U.

Stanolind O. & G. Co. No. 5 Holland and Price, H.T.&B. Sur. No. 6. Bldg. drk.

Tomball—Harris County

Humble O. & R. Co. No. 1 Farris et al, W. Usner Sur. Drlg. sh. 4,052 ft.

Humble O. & R. Co. No. 5 H. S. Gebhard W. Perkins Sur. T.D. 5,563 ft.; 5½-in. csg. 5,562 ft.; I.P. 20 B.P.H.; ¼-in. ck.

Humble O. & R. Co. No. 4 Theis, C. M. Pillott Sur. Drlg. sdy. sh. 5,445 ft.

Humble O. & R. Co. No. 1 Tomball Townsite, Unit 13, R. Hubbard Sur. T.D. 5,-584 ft.; 5½-in. csg. 5,578 ft.

Kourey Drlg. Co. No. 2 Hillegeist, J. House Sur. Drk.

Shell Pet. Corp. No. 2 Beeler, J. Pruitt Sur. Drlg. sh. 107 ft.; (cor.)

Texas Co. No. 4 Ziegler, Wm. Hurd Sur T.D. 5,581 ft.; 7-in. csg. 5,571 ft.; I.P. 500 B.P.D.; ¼-in. ck.

Mauritz—Jackson County

Shell Pet. Corp. No. 1-B Mauritz, R.U.

Amelia—Jefferson County

Glenn H. McCarthy No. 3-B Longe, H. Williams Sur. Drlg. sh. 5,530 ft.

Humble O. & R. Co. No. 1 A. Busceine, C Blk. 3, C. Williams Sur. Loc.

Humble O. & R. Co. No. 1 T. H. Crook, C. Williams Sur. T.D. 6,781 ft.; perf. csg. 6,774-78 ft.; I.P. 26 B.P.H.; ¼-in ck.

Humble O. & R. Co. No. 1 Freeman, C. Williams Sur. Drlg. sh. 1,050 ft.

Humble O. & R. Co. No. 1 Industrial Investment Co., Unit 1-B. C. Williams Sur. 13⅜-in. csg. 215 ft.; drlg. sh. 6,012 ft.

Humble O. & R. Co. No. 1 J. E. LaGrange, Lot 33, Blk. E, C. Williams Sur. Drlg. sh. 1,212 ft.

Humble O. & R. Co. No. 1-B M. I. Lefler, Unit 19, Blk. E, C. Williams Sur. Loc.

Humble O. & R. Co. No. 1-C M. I. Lefler, Lot D, C. Williams Sur. Loc.

Humble O. & R. Co. No. 1 M. Lefler, Amelia Heights Subd., C. Williams Sur. 13⅜-in. csg. 226 ft.; drlg. sh. 4,975 ft.

Humble O. & R. Co. No. 1 A. L. Nolan, Blk. E. Williams Sur. Loc.

Humble O. & R. Co. No. 3 J. H. Phelan, C. Williams Sur. Loc.

Stanolind O. & G. Co. No. 1 J. W. Hall, H. Williams Sur. Loc.

Stanolind O. & G. Co. No. 2 Sargl, H. Williams Sur. Loc.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 1 Fitzhugh, McFaddin Sur. 10¾-in. csg. 1,861 ft.; T.D. 4,927 ft., oil sand, 7-in. csg. 4,913 ft. reset screen; flowed 282 bbls. of fluid per day through ¼-in. ck.

Fannett—Jefferson County

Gulf Oil Corp. No. 1 Junker, W. A. Smith Sur. Drlg. sd. 5,453 ft.

LaBelle—Jefferson County

Sun Oil Co. No. 1 John Ward, 933 ft. S of No. 2 Broussard, Wm. Burton Sur. Moving in.

Nome—Jefferson County

Shell Petroleum Corp. No. 5 Carpenter, M.Peveto Sur. Cg. sd. and sh. 6,005 ft.

Shell Pet. Corp. No. 5 Paggi, Kirby Sur. R.U.

Sun Oil Co. No. 1 Long, J. Blair Sur O.W.D.D.; T.D. 9,045 ft.; cutting and P.B. 5,660 ft.; to sdtrk.; drlg. sh. 6,-050 ft.

Sun Oil Co. No. 6 Paggi, J. W. Kirby and W. H. Aldridge Sur. Loc.

Sun Oil Co. No. 7 Paggi, J. W. Kirby and W. H. Aldridge Sur. Loc.

Sun Oil Co. No. 1 A. J. Mouboules, J. Blair Sur. 10¾-in. csg. 1,062 ft.; drlg. sh. and L. 8,124 ft.

Spindletop—Jefferson County

Unity Oil Co. No. 3 Oalswood Realty Co., Droeglet Sur. Spudded.

Cleveland—Liberty County

Gulf Oil Corp. No. 17-C Kirby, J. Pleasants Sur. Loc.

Gulf Oil Corp. No. 4-C McDonald. T.D. 5,894 ft.; sd. with gas odor.

Hankamer—Liberty County

Gulf Oil Corp. No. 2-A Weiser, George Stengler Sur. Drlg. sh. 3,268 ft.

Hull—Liberty County

Bishop Oil Co. No. 1 C. R. Wilson, J. DeVore Sur. R.U.

D.&L. Production Co. No. 4 Mecon and Layton, J. DeVore Sur. Drlg. sh. 1,474 ft.

Eclipse Oil Co. No. 1 Barrow. T.D. 5,014 ft.; S.D.

Gulf Oil Corp. No. 23 Baldwin, J. Devore League Sur. Drlg. sh. 1,606 ft.

Republic Prod. Co. No. 1 J. C. Baldwin J. Devore Sur. T.D. 5,531 ft.; I.P. 629 B.P.D.; ¼-in. ck.

Esperson—Liberty County

General Crude Oil Co. No. 26 Moores Bluff. Loc.

Bay City—Matagorda County

Hamman Expl. Co. No. 1 J. H. Crocker E. Hall Sur. 13⅜-in. csg. 1,260 ft 9⅝-in. csg. cmtd. at 6,500 ft.; T.D. 9,575 ft.; 7-in. csg. 9,575 ft.; perf. csg. 8,806-19 ft., 8,832-36 ft., 8,944-8,949 ft., tstd. S.W.; set cmt. retainer at 8,200 ft.; perf. csg. 8,190-94 ft.; flwd. 650 bbls. through D.S.; W.P. 300 lbs.; grav. 37. rng. tbg. to test.

Hawkinsville—Matagorda County

Sun Oil Co. No. 2 Craig, T. Williams Su Top salt 796 ft.; base salt 2,099 ft 18⅝-in. csg. 2,174 ft.; 13⅜-in. csg. 3,700 ft.; T.D. 3,727 ft.; swbd. 25 B.P.D.; cutting screen and lnr.

Markham—Matagorda County

Texas Gulf Prod. Co. No. 1 McDonald, I &G.N. Sur. No. 7. Abd. 4,677 ft.

Thompson Drlg. Co. No. 1 R. J. Sisk, Blk No. 2. T.D. 3,285 ft.; tstg.

Turman Oil Co. et al No. 1 Hudson, H Parker Sur. T.D. 3,670 ft.

Van Vleck—Matagorda County

Skelly Oil Co. No. 2 W. P. Johnson, W Cummins Sur. Loc.

Royal Oil Co. No. 1 Fine Holub, M. Cummings Sur. Drk.

Skelly Oil Co. No. 2 Rugely, I.&G.N. No. 8. 10¾-in. csg. 1,399 ft.; drlg. sdy. sh. 5,300 ft.

Skelly Oil Co. No. 1 First Natl. Bank I.&G.N. Sur. No. 7. Cg. sd. 7,637 ft.

Conroe—Montgomery County

Houston Oil Co. No. 13 R. L. Cartwright J. Davis Sur. T.D. 5,155 ft.; 7-in. csg. 5,137 ft.; I.P. 432 B.P.D.; ¼-in. ck.

Normandie Oil Co. No. 1 Fairey, G. Harris Sur. R.U.

Normandie Oil Co. No. 1 Urech. 7-in. csg. 5,088 ft.

Sun Oil Co. No. 6 South Texas Dev. Co. Drlg. sd. 210 ft.

Ace—Polk County

Peyton Bros. et al No. 1 McDonald, P. A. Sublett Sur. R.U.

Segno—Polk County

J. K. Dorrance No. 2 Wing Estate, I.&G. Sur. No. 15. T.D. 5,197 ft.; rng. 7-in. csg.

Gulf Oil Corp. No. 1 Wing, I.&G.N. Sur. No. 15. Moving in.

Humble O. & R. Co. No. 1 Kirby Lbr. Co. P. Garcia Sur. Drlg. 100 ft.

Quintana-O'Connor-Greta—Refugio County

Cosmo Pet. Co. No. 15 Heard, Lot 7. Drlg. 3,690 ft.

Floboots Oil Corp. No. 3-C O'Brien, Winfield Sur. 7-in. csg. 4,390 ft.; comp.; no gauge.

Hewitt & Daugherty No. 40 Lambert, Swisher Sur. No. 7. 7-in. csg. 5,918 ft.

Hewitt & Daugherty No. 41 Lambert, Swisher Sur. No. 7. Drlg. sh. 5,500 ft.

Illinois Pet. Co. No. 2 Heard, Ximines Sur Oil sd. 5,530-50 ft.; 7-in. csg. 5,929 ft.

Josey & Bruton No. 4-A Lambert, Swisher Sur. Cd. sd. 5,883-5,900 ft.; T.D.; run csg.

Quintana Pet. Co. No. 5 Heard, T. H. Webb Sur. R.U. and S.D.

Quintana Pet. Co. No. 40 Lambert, Swisher Sur. Loc.

Quintana Pet. Co. No. 43 Lambert, Swisher Sur. Loc.

Quintana Pet. Co. No. 46-A Tom O'Connor, J. M. Swisher Sur. No. 4. Drk.

Quintana Pet. Co. No. 3 Riley, M. J. Ximines Sur. Cg. 5,390 ft.

United Gas Corp. No. 38 Lambert, Swisher Sur. T.D. 5,915 ft.; I.P. 115 B.P.D.

United Gas Corp. No. 40 Lambert, Blk. 45, Swisher Sur. Drlg. 5,150 ft.

United Gas Corp. No. 43 Lambert, J. M. Swisher Sur. Drlg. 4,303 ft.

United Gas Corp. No. 48 Lambert, J. M. Swisher Sur. Moving in.

United Gas Co. No. 12 J. J. O'Brien. Cg. 6,790 ft.

Keeran—Victoria County

Gulf Oil Corp. No. 10 Keeran Estate, M. DeLeon Sur. T.D. 1,050 ft.; W.O.C.

Union of California No. 3 J. M. Keeran Est., M. DeLeon Sur. Drlg. 1,136 ft.

Placedo—Victoria County

Barnsdall-American Liberty Oil Co. No. 3 E. G. Gray, S.A.&M.G. Sur. Drk.

Barnsdall-American Liberty Oil Co. No. 9 J. M. Pickering et al., J. W. Black Sur. Drlg. 3,110 ft.

Barnsdall Oil Co.-American Liberty Oil Co., Lot 4, S.A.&M.G. Sur. S.D. 5,911 ft.

Crown Central Oil Co. No. 4 O. M. Lauder, S.A.&M.G. Sur. No. 6. T.D. 4,786 ft.; tstg.; swbd. S.W. and oil.

Magnolia Pet. Co. No. 5 Charles Sklar, A.&M.G. Sur. 7-in. csg. 4,758 ft.; tstd. dry gas.

Shell Pet. Corp. No. 1 Houston Natl. Bank, S.A.&M.G. Sur. No. 7. T.D. 4,765 ft.; 7-in. csg. 4,756 ft.; I.P. 9 B.P.H.; ¼-in. ck.

Sun Oil Co. No. 5 Marek, Lot 89, S.A.&M. Sur. No. 8. 7-in. csg. 4,767 ft.; T.D. 4,774 ft.; I.P. 57 bbls. by heads.

Superior-Gillespie No. 2 Joe Hosek, S.A.& M.G. Sur. No. 70. Drlg. 4,720 ft.

Superior Oil Prod. Co. and Gillespie No. 3 J. J. Hosek, S.A.&M.G. Sur. Drk.

Westgate Oil Co. No. 6 F. F. Mieska, S.A. &M.G. Sur. No. 10. Drk.

Clay Creek—Washington County

Sun Oil Co. No. 1 H. Lauter, N. Clay 7-in. csg. 7,445 ft.; T.D. 8,306 ft.; P.B. to csg. seat; perf. csg. 7,549-7,365 ft. and 5,100-10 ft.

Virginia Oil Co. No. 1 Joe Kenieczny, S. M. Williams Sur. Moving in drk.

Five Corners—Wharton County

Texas Co. No. 6-B Pierce, J. Hyland T.D. 5,572 ft.; P.B. and sdtrkd.; T.D. 5,476 ft.

Pickett Ridge—Wharton County

Texas Co. No. 1 J. Tlustos, H.&T.C. Sur. No. 192. Drlg. L. and sd. 3,508 ft.

Spanish Camp—Wharton County

Fairmont Oil Corp. et al No. 1 Lyle Logue D. Wade Sur. T.D. 7,901 ft.; rmg.

Withers—Wharton County

Texas Co. No. 21-C Pierce, Wm. Pettus Sur. 10¾-in. csg. 1,218 ft.; T.D. 5,556 ft.; 7-in. csg. 5,547 ft.

Texas Co. No. 23-C Pierce, Wm. Pettus Sur. Drlg. sh. and L. 4,781 ft.

Texas Co. No. 24-C Pierce Est., Wm. Pettus Sur. Drk.

GULF COAST WILDCATS

Austin County

S. L. Hopkins No. 1 J. W. Recnecke, J. Stephenson Sur. R.U.

Brazoria County

Pure Oil Co. No. 1 P. M. Slade, S. F. Austin Lge. T.D. 3,482 ft.; drlg. sh. 3,-594 ft.

Texas Co. No. 2 Robbins, James W Brougham Sur. Drlg. hd. L. 3,525 ft.

Calhoun County

Matagorda Oil Co. No. 1 Brundet, Tr. 3 Matagorda Island, 13⅜-in. csg. at 1,82[illegible]

Fayette County

O'Neil Pet. Co. No. 1 Dybla, A. Thompson Sur. 10¾-in. csg. 21 ft.; drlg. 2,210 ft.

Fort Bend County

Earl Trone et al No. 1 E. Trone, H.&T.C. Sur. No. 67. Drk.

Galveston County

Shell Pet. Corp. No. 2 Maco Stewart, 4,-000 ft. E of No. 1 J. Spillman Sur. 10¾-in. csg. 1,484 ft.; T.D. 6,116 ft.; rmg.

Hardin County

A. S. Deskin No. 1 Mary B. Collier, O. C. Nelson Sur. Loc.

E. J. Kimball No. 1 Keitle Lbr. Co. Loc.

Harris County

Farrel and Cox No. 1 Bender, N. W. Ellis Sur. 6⅝-in. csg. 1,000 ft.; W.O.C.

S. W. Ford et al No. 1 W. A. and O. C. Pruitt, G. Brooks Sur. Loc.

George Lawrence et al No. 1 Zoppa, Farwell Sur. 10¾-in. csg. 605 ft.; T.D 6,525 ft.; P.B. to test sd. 6,206-26 ft.; stuck drill pipe at 1,500 ft.; S.D.

S. M. Harrell et al No. 1 F. N. Bullock, Charles Bowman Sur. R.U.

Stanolind O. & G. Co. No. 1 Warren Minerals, H.T.&B. Sur. No. 1. 7⅝-in. csg. 2,749 ft.; drlg. sh. 6,533 ft.

Superior Oil Co. No. 1 Bentler, Ehrhardt Sur. Loc.

Texas Gulf Prod. Co. No. 1 Gillespie and Garnsey, Simon Contreras Sur. 10¾ in. csg. 1,438 ft.; T.D. 6,971 ft.; tstd. S.W. on D.S.T. 6,925-71 ft.; cg. ahead.

Houston County

American Liberty Oil Co. No. 1 J. D. Bean, D.W.R.R. Co. Sur. 10¾-in. csg. 1,796 ft. T.D. 6,041 ft.; tight sd.

Arthur Cameron No. 1 A. B. Spence, D. Aldrich Sur. Top Woodbine 6,048 ft.; T.D. 6,250 ft.; abd.

H. L. Hunt No. 1 J. E. Elliott, J. M. Procella Sur. 13⅜-in. csg. 495 ft.

Jackson County

Texas Co. No. 1 T. A. Mauritz, Morris and Cummings Sur. Drlg. sh. 1,620 ft.

Jefferson County

Humble O. & R. Co. No. 1 Jefferson Ld Co., C. Hillibrant Sur. T.D. 8,232 ft.; 7-in. csg. 8,162 ft.; T.D. 8,458 ft.; cutting and pulling stuck D.S.

Magnolia Pet. Co. No. 1 J. H. Phelan, T.&N.O. Sur. No. 14. M.I.M.

D. B. McDaniel et al No. 1 Nona Mills, J. C. Grant Sur. Loc.

Lavaca County

Wilshire Union Oil Co. No. 1-A P. Bass Sur. T.D. 3,250 ft.; P.B. 2,950 ft., two tests failed; S.D.

Liberty County

Kenco Oil Corp. No. 1 E. B. Pickett, H. T.&B. Sur. No. 10. 10¾-in. csg. 1,237 ft.; T.D. 6,889 ft.; washing to bottom.

Matagorda County

Continental Oil Co. No. 2 Robbins, Franz Sur. 11¾-in. csg. 6,430 ft.; T.D. 8,908 ft.; prep. to run 8⅝-in. csg.

Glenn McCarthy No. 1 Foley, sec Susan Perkins Sur. 10¾-in. csg. 2,008 ft. T.D. 8,400 ft.; S.D. to run csg.

United North and South Development Co., J. S. Cotton Sur. Coring sh. and sd. 8,055 ft.

Polk County

Mayo et al No. 1 Catline Mayo J. G. Loving Sur. 10¾-in. csg. 250 ft.; drlg. sh. 710 ft.

Refugio County

Paul Meadows No. 1 Temple Lbr Co., G. W. Main Sur. S.D. 6,760 ft.; abd.

Wynne Drlg. Co. No. 1 C. D. Roadche-J. Patrick and J. Downey Sur. T.D. 5,486 ft.; D.S. stuck.

Tyler County

Republic Prod. Co.-Houston Oil Co. No. 3 Hurd, N. Hurd Sur. 10¾-in. csg. 2,296 ft.; W.O.C.

Victoria County

Commonwealth O. & G. Co. No. 3 W. H. Bennett, J. Estuvan-Galbon Sur. R.U.

Magnolia Pet. Co. No. 1 Annie B. Wayne, T.&N.O. Sur. No. A-407. Drlg. sh. 3,-200 ft.

Walker County

Garland, Hartman & Page No. 1 Carey Ld. & Dev. Co., D. M. McDonald Sur. R.U.

Waller County

Nine Blumenthal No. 1 Alex P. Kelley, S. H. Haddin Sur. M.I.R.

Sumas Prod. Co. of Austin No. 1 J. J. Menker, 10¾-in. csg. 300 ft.; drlg. sh. 4,820 ft.

H. E. Williams No. 1 T. C. Giddings Est., David Mouser Sur. Drlg. sh. 2,760 ft.

Washington County

Smith & Schlinke No. 1 Woode, J. Clark Sur. S.D. 3,000 ft.

Wharton County

Sam Harrison No. 1 Byerly, E.T.R.R. Sur. No. 27. Abd. 6,500 ft.

J. F. Hutchins No. 1 J. J. Winsley, James Tumlinson Sur. R.U.

Texas Co. No. 1 Kluck, Jos. Hyland Sur Drlg. sh. 5,822 ft.

Texas Co. No. 1 E. A. Wheatherer, L. P. Ogden Sur. Drlg. sh. 5,134 ft.

S. W. TEXAS WILDCATS

Aransas County

Barnsdall Oil Co. No. 1-A Kate Edwards, 330 ft. S line, Lot 85, 660 ft. SW No. 1. Wm. Lewis Sur. Set 10¾-in. csg. 1,408 ft.; drlg. 4,620 ft.

Atascosa County

Frontier Oil Co. No. 1 Oppenheimer, John Sharp Sur. Set csg. 2,770 ft.; bailing.

L. G. Priest (F. Fuchs) No. 1 Sanders, J. P. Garmon Sur. D.&A. 3,000 ft.

R. J. Roberts et al No. 1 Elder, Sur. 190. Drlg. 911 ft.

Bee County

Dirks Bros. No. 1 Strouch, 990 ft. S line, 150 ft. W line, 50-ac. tr., sec. 19, Uranga Gr. Drlg. 3,953 ft.

J. R. Dougherty No. 1 Weiss, 1,300 ft. E line, 6,200 ft. N line, Uranga Gr. Cg. 4,336 ft.

La Salle Pet. Co. No. 1 Ray, Anna Burk Sur. T.D. 5,400 ft.; D.&A.

W. C. McBride, Inc., No. 1 Brown & Hansen, J. Pace Sur. Pettus sd. 3,567 ft.; dry; drlg. 3,573 ft.

Blanco County

E. L. Nixon No. 1 Hornberger, 1,200 ft. S line, 300 ft. E line, Sur. 723. Drlg. 816 ft.

Brooks County

Texas Gulf Prod. Co. No. 1 Proctor, 330 ft. S and E lines, Blk. 2, sec. 20, Los Almos and Loma Blanca Surs. Drlg. 4,506 ft.

Burleson County

M. R. Exploration Co. No. 3 Fountain, Wm. Raleigh Sur. M.I.M.

Red Bank Oil Co. No. 2 Grann, 3,063 ft. N line, 1,900 W line, E. Santef Sur. M.I. Rlg.

Caldwell County

C. A. McDaniels No. 1 Trammel, H. Hunter Sur. Drlg. chalk; no report.

Exploration Co. No. 1 E. Band, S. Seale Sur. D.&A. 2,585 ft.

C. A. McDaniels No. 1 Tinkle, S. Seal Sur T.D. 2,681 ft.; P.D. 2,490 ft.; swbg. oil.

George Young No. 1 Schmidt, 1,265 ft. E line, 150 ft. S line, Williams Sur. Set csg. 1,362 ft.; W.O.C.

Cameron County

Saxet Prod. Co. No. 1 Port Isabel Irr. Co., 600 ft. N line Loma Alta Lake, Sh. 29, Espiritu Santo Gr. Loc.

Stapper Petroleum Corp. No. 1 Port Isabel Irrigation Co., Blk. 17, P.I.I.Co. Subd., Santo Gr. Drlg. 4,621 ft.

Dimmitt County

Wilcox O. & G. Co. No. 1 Light ranch, NW Blk. Loc.

Duval County

Argo Oil Co. and Clopton No. 2 Smith-Corkill, Sur. 61. T.D. 3,140 ft.; P.B. 2,760-88 ft.; flwg. 250 B.P.D. fluid, 80% S.W., 20% oil.

Clark & Cowden No. 3 Richardson, 2,310 ft. W line, 330 ft. S line, Sur. 5. Loc.

Frank Gravis No. 1 Vaello Puig, 330 ft. W line, 2,718 ft. S. line, 1,760.73-ac. tr., Sur. 250. Drlg. 1,206 ft.

C. K. Gravis No. 1 Holzapfel, N½ Sur. 42. Tstg. sd. 990-1,040 ft.

Humble O. & R. Co. No. 1 C. D. Sevier, Sur. 329. T.D. 4,096 ft.; D.&A.

Intrepid Oil Co. No. 3 Parr, SW¼, sec. 26. Loc.

Magnolia Pet. Co. No. 1 D.C.R.C., 330 ft. S and W lines, lse., sec. 902. Loc.

Edwards County

Auld, Dodson & Lyman No. 1 Rigsby, sec 16. Loc.

I.T.I.O. No. 1 Love & Evans, sec. 66, Blk. 3, G.W.T.&P. Ry. Sur. (Workover). Prep. deepen from O.T.D. 3,002 ft. to 6,250 ft.

Fayette County

McNeil Pet. Co. No. 1 Dybola, A. Thompson Lge. R.U.

Goliad County

Rual Singer No. 1 C. Wood, Geo. Villa Sur. Drlg. 5,736 ft.

Gonzales County

M. S. Holliday No. 1 Edwards, W. W. Page Lge. Drlg. 1,577 ft.

Guadalupe County

Lincoln Pet. Co. No. 1 Baenzinger, Mansola Sur. Set csg. 1,990 ft. Drlg. plugs.

J. B. Stoddard No. 1 Harris, G. DeWitt Sur. Top chalk 2,036 ft.; T.D. 2,146 ft.; acidizing.

Hidalgo County

Dale Smith No. 1 Fairbanks & Young, Blk. 44. Porc. 46, jurisdiction of Reynosa. Drlg. 2,316 ft.

Rinehart et. al. No. 1 White, 7,500 ft. E line, 7,200 ft. N line, Ejidos Gr. Spudded; S.D.

Sun Oil Co. No. 1-A Sweeny Est., Lot 1, Wayne Wood Subd. No. 2. T.D. 6,598 ft.; stdg.

Jim Hogg County

Cole Pet. Co. No. 1 Yeager, Sur. 452. Loc.

Gifford Oil Co. No. 1 Armstrong, Sur. 41. 5-min. D.S.T. 3,056-63 ft.; made 400 lbs. dry gas; sd. 3,056-61 ft.; fsg. 4,358 ft.

S. Payne No. 1 Holbien, 150 ft. N and W lines, Blk. 10, Sh. 3, Animas Gr. R.U.

Jim Wells County

Arkansas Fuel Oil Co. No. 1 G. H. Bierstadt, Blk. 32, Reynolds Sur. Cg. 4,842 ft.

Baltic Drlg. Co. No. 1-A Owens, Sur. 181. Drlg. 4,356 ft.

Tesmalis & Reese No. 1 Martha Earhart, 330 ft. S and W lines, 80-ac. tr., Suggs Sur. Spudded.

Karnes County

De Graff & Reele No. 1 Cochran, 460 ft. E line, 160 ft. S line, McConnell Lge. Drlg. 573 ft.

Victoria Drlg. Co. No. 1 John Yanta, J. Hardaway Sur. T.D. 1,511 ft.; S.D.

Victoria Drlg. Co. No. 1 Wm. Yanta, J. Hardaway Sur. M.I.M.

Kerr County

S. W. Forrester No. 1 Baily, Brendle Sur. No. 408. Washing down 740 ft.

Live Oak County

H. Coquat No. 1 L. Reagan, Santiago McGloin Sur. Drlg. 3,216 ft.

R. A. David et al No. 1 Border Nat'l Bank, 150 ft. N and W lines, 150-ac. tr., Hayes Sur. Loc.

R. H. Feltner No. 2 Sanger, 330 ft. W line, 990 ft. N line, Sur. 385. Loc.

Loma Oil Co. No. 2 Cardwell, 95-ac. tr., Sparks Sur. Loc.

Marzo Oil Co. No. 1 Chestnut, L. Ayres Sur. Drlg. 642 ft.

Reynolds & Richardson et al No. 1 Geo. West, 330 ft. N and W lines, sec. 515, J. Poitevent Sur. Drlg. 2,965 ft.

R. B. Sanger No. 1 Adams, 330 ft. N and E lines, 80-ac. tr., Sur. 122. R.U.

McMullen County

Big Rock Oil Corp. No. 1 Martin, Uleiting Sur. No. 6. S.D. 532 ft.

Humble O. & R. Co. No. 1 Gouger, 330 ft. S and E lines, SE¼, sec. 46. Loc.

Rowan & Hope No. 1 Rhodes, NE¼ sec. 18, Seale & Morris Sur. M.I.M.

Medina County

A. Chmel No. 1 Odem, 160 ft. W line, 493 ft. N line tr., Castro Sur. 174. M.I.M.

Gates, Hill & Mead No. 1 Kreisle, Sur. 908. Loc.

Nueces County

Allen & Seaboard Oil Corp. No. 2 Chapman, 660 ft. S and W lines, sec. 38, 10-min. D.S.T. 6,462-71 ft. with 930 ft. water cushion, recovered. 1,080 ft. 42 grav. P.L.O. with W.P. 20 lbs.; cored oil sd. 6,464-83½ ft.; sh. 6,483½-6,507 ft.; T.D. 6,720 ft.; set csg.; perf. 6,464-83½ ft.; made S.W.; recmtd. to test again.

Cowan & Storey No. 1 Smith, Blk. 22, sec. 38, Flour Bluff and Encinal Garden Trs. Abd. loc.

E. M. Jones No. 1 Cook, 2,500 ft. N line, 330 ft. E line, 546-ac. tr., Guadrilla Irr. Co. Sur. 139, Sd. 3,532-39 ft.; slight S.G.; drlg. 3,563 ft.

Mills Bennett Prod. Co. No. 1 Lamb, 330 ft. E Mathis Highway, 330 ft. N line, 80-ac. tr., 527.4-ac. tr., V. Lopez de Herrera Sur. Drlg. 7,152 ft.

Sloan & Green No. 1 Cassens, sec. 38, Longorio Sur. R.U.

Southern Minerals Corp. No 1 R. King, sec. 32, King Farm Lots. T.D. 3,800 ft.; making electrical sur.

Steve Paul No. 1 Smith, 1,650 ft. E line, 330 ft. S line, sec. 38, Flour Bluff Encinal Trs. Loc.

Baltic Drlg. Co. No. 1 Poenisch, Lot 2, Blk. 32, Flour Bluff Addn. (workover of former Hurlburt test). O.T.D. 6,250 ft.; R.U.; S.D.

Real County

Sun Oil Co. No. 1 Dietert, 1,980 ft. E line, 660 ft. S line, sec. 7, G.W.T.&B. Sur. Drlg. 5,062 ft.

San Patricio County

Buckingham Oil Co. No. 1 G. Davis, Sec 27. Loc.

W. B. Craig No. 1 Drainage Ditch, M Remon Sur. Hd. sd. cap. 4,907-10 ft.; sd. 4,910-11 ft. S.O.; tested 1,030 ft salty mud, taste of oil; T.D. 5,020 ft.; D.&A.

Eleanor Oil Co. No. 1 Davis, 208.8-ac. tr., G. Grover Sur. M.I.M.

Eleanor Oil Co. No. 1 Green Est., 1,674-ac. tr., T. T. Williamson Sur. Drlg. 5,-647 ft.

Phillips Pet. Co. No. 1 Schmidt, sec. 81, Paul Subd. Fsg. 4,600 ft.

Windsor Oil Co. No. 1 Bissett, Tr. 3, Tivoli Subd., Crockett Sur. Loc.

Starr County

J. H. Clopton No. 4 Tijerina, Lot 12, Sh. 14-C, Porc. 80. Drlg. 176 ft.

Cook, Morris & Arnold No. 2 S.C.C.C., Blk. 23, Porc. 89. R.U.

C. T. Daye No. 1 Seabury, Sh. 5, Porc. 75. Spudded in.

Dodd Trustee No. 1 Wood Estate, Porc. 84. Drlg. sh. 1,826 ft.

Donroy Oil Co. No. 1 Ramon, 2,400 ft. SE line, 150 ft. SW line, sec. 150. Drlg. 282 ft.

G. Harroun No. 1 Guerra, Blk. 6, Porcs. 55 and 56. R.U.

Webb County

J. M. Anderson No. 1 Juarez, Blk. 13, Sur. 1,111. Drlg. 1,926 ft.

Bolling & Coffey No. 1 So. Tex. Oil Co., Sur. 768. Loc.

French Oil Co. No. 2 Garcia, S½, Sur. 1,121. Drlg. 1,132 ft.

O. W. Killam No. 1 fee, Sur. 1,690. T.D. 4,766 ft.; S.D.

Lu-Tex Oil Co. No. 1-A Lone Star Const. Co., Blk. 26, Porc. 12, 13 and 14. Drlg. 1,521 ft.

Mills Bennett Prod. Co. No. 1 Martinez, Blk. 84, Sh. 1, E. P. Grullo Gr. Drlg. sh. 1,117 ft.

Joe Palmer No. 1 Laredo Natl. Bank. 1,980 ft. S and W lines, Sur. 463. Drlg. 1,361 ft.

Wilcox O. & G. Co. No. 1 Dunbar, Sur. 2,292. J. Galen Gr. Drlg. 4,652 ft.

Willacy County

Ruez-Morton, Inc., No. 1 F. Armendiaz C Lot 9, Sh. 4, San Juan de Carricitos Gr. Drlg. 537 ft.

Ruez-Morton, Inc., No. 1 Johnson-Stillman, Lot 14, Blk. 25, Sh. 44, San Juan de Carricitos Gr. Drlg. sh. 526 ft.

Shell Pet. Corp. No. 1 Yturria, Sh. 64, San Juan de Carricitos Grant (workover) T.D. 7,662 ft.; to drill deeper; R.U.

Zapata County

Fidelity Oil & Roy. Co. No. 1 Gopher Unit, Blk. 9, Sur. 6, Loc.

H. Guinn Lewis No. 1 S. Benavides, Blk. 39, Villa Gr. Set sur. csg.; W.O.C.

Ivan Howard and R. F. Duggan No. 1 Cuellar Bros., Sur. 248. R.U.

Jennings No. 1 Martinez, Sur. 434. T.D. 150 ft.; S.D.

R. Wheeless No. 1 Welch, Blk. 1. E. K. Bateman Subd. Drlg. below sur. csg.

Zavalla County

Wilcox O. & G. Co. No. 1 Gillman, sec. 11. Drlg. 2,193 ft.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Ref. Co. No. 2 Maryland Trust Co., 330 ft. N and E lines, Blk. 23, Loc.

Atlantic Ref. Co. No. 3-B McCampbell Lot 5, Blk. 40, T.D. 6,550 ft.; perf. 6,541-44 ft.; comp.; 55 B.P.D. on ⅛-in. ck.

Atlantic Ref. Co. No. 4-B McCampbell Lot 7, Blk. 40, R.U.

Atlantic Ref. Co. No. 4-C McCampbell, Lots 11 and 12, Blk. 40, Loc.

Buckingham Oil Co. No. 2-B McCampbell, Lot 13, Blk. 40. Drlg. 1,026 ft.

Buckingham Oil Co. No. 4-A McCampbell, Blk. 41, Orick Sur. Drlg. 3,526 ft.

Collins & Broughton No. 1 McCampbell Lot 5, Blk. 37, McCampbell Subd. Drlg. 5,540 ft.

J. Nelson No. 1 Riggs, 330 ft. NW line, 213 ft. SW line, 6.46-ac. tr., Trs. 12 and 13, Blk. 16, Loc.

Hilbig—Bastrop County

Joe E. Mills No. 1 Askew, 600 ft. N'ly line, 1,525 ft. SW line, 278.5-ac. t. Wolfenberger Sur. T.D. 2,907 ft.; S.D.

Cosden—Bee County

Elwood & Young No. 3 Barnett, John Place Sur. Sd. 3,636-53 ft.; S.O.; P.B. 3,94 ft.; T.D. 4,050 ft.; S.D.; W.O.O.

Plummer—Bee County

W. C. McBride No. 1 Plummer, 34-ac tr., sec. 33, Plummer-Chessman Sur Loc.

H. J. Weinert No. 1 Smith, Plummer-Chessman Sur. Drlg. 261 ft.

Alta Mesa—Brooks County

Standard of Texas No. 1 Garcia, 1,398 ft. N and W lines, Tr. 1, Sh. 1-A, La Mestina de Gonzales Sur. Set sur. csg.; W. O.C.

Standard of Texas No. 3 Garcia, 615 ft. S line, 465 ft. W line, Tr. 1, Sh. 1-A, La Mestina de Gonzales Sur. Set 13⅜-in. csg. 194 ft.; W.O.C.

Alta Verde—Brooks County

L. & W. Oil Co. No. 1 Wm.Singer, Blk. 8 Sur. 436. Sd. 515-20 ft.; set ¼-in. csg 934 ft.; T.D. 948 ft.; tested sulfur wtr with S.O.; prep. to drill deeper.

Branyon—Caldwell County

Adams & Lyles No. 3 Ellison, D. Cooper Sur. Cg. 2,047 ft.

Blundell et al No. 1 Luce, J. Neil Sur. Completing; T.D. 2,169 ft.

R. B. Byrd No. 1 McGee, J. A. Neal Sur. Drlg. 212 ft.

Lincoln Pet. Co. No. 4 Branyon, Cooper Sur. Loc.

Taylor Pet. Co. No. 1 Caldwell County, 4 ac. tr., D. Cooper Sur. Drlg. 566 ft.

Whisenant & Trenchard No. 1 Young, J. R. Miller Sur. T.D. 2,225 ft.; R.U. to pmp.

Slick—DeWitt County

Geo. B. White No. 2 Poetter, O. Marshall Sur. Drlg. 4,246 ft.

Charamousca—Duval County

Magnolia Pet. Co. No. 1 D.C.R.C., Sur. 152. Drlg. 2,886 ft.

Colmena—Duval County

Conservative Oil Co. No. 1 Brown-Lentz, Blk. 12, sec. 51. R.U.

Conservative Oil Co. No. 3 D.C.R.C., Blk. 12, Sur. 51. Sd. 1,497-1,507 ft.; comp.; 80 B.P.D.

Conservative Oil Co. No. 6 D.C.R.C., Blk. 12, Sur. 51. P.B. from T.D. 1,521 ft.; W.O.C.

Hooper & Rutherford No. 2 D.C.R.C., Tr. 13, sec. 51. Drlg. 230 ft.

Wellington Oil Co. No. 3 D.C.R.C., Blk. 16, sec. 51. Sd. 1,485-92 ft.; comp.; 192 B.P.D. on ⅛-in. ck.

Wellington Oil Co. No. 4 D.C.R.C., Blk. 10, sec. 51. Set csg. on sd. 1,457-77 ft.; W.O.C.

Driscoll—Duval County

Continental Oil Co No. 13-A Sevier, Sur. 448. Drlg. 3,396 ft.

El Mesquite—Duval County

Rogers & Rogers No. 3 Pena, El Mesquite Gr. R.U.

Government Wells—Duval County

Magnolia Pet. Co. No. 6 Harvill, NE¼ SW¼, Sur. 64. Cg. 2,356 ft.

San Diego Oil Corp. No. 1 Millard, Sur. 64. Drlg. 2,956 ft.

Hoffman—Duval County

Bridwell Oil Co. No. 7-B Hoffman, Sur. 122. R.U.

Duval Oil Corp. No. 9 Hoffman, Sur. 118. Sd. 2,847-57 ft.; comp.; 23 B.P.D.

Duval Oil Corp. No. 10 Hoffman, Sur. 118. Sd. 2,876 ft.; tstg.

Plymouth Oil Co. No. 5 Hoffman, 1,650 ft. N line, 2,310 ft. E line, Sur. 117. Drlg. 2,783 ft.

Standard of Kansas No. 3 Green, Sur. 118. Sd. 2,716-18 ft.; tstd. S.W.; drlg. 2,863 ft.

Standard of Kansas No. 4 Green, Sur. 118. Loc.

Kohler—Duval County

Chiquita Oil Co. No. 1 Peters, 162-ac. tr., Sur. 162. Drlg. wtr. well.

Humble O. & R. Co. No. 55-A Kohler, Sur. 164. T.D. sd. 2,622 ft.

Humble O. & R. Co. No. 3 Peters, sec. 398, Flwg. 10 bbls. fluid for 17 hrs., 36% wtr.; T.D. 2,658 ft.; P.B. 2,655 ft.; rng. tbg. 2,655 ft.

Sun Oil Co. No. 1 Peters, 330 ft. S and W lines, Sur. 161. Set csg. 2,446 ft.; comp.; gasser; spraying oil.

Windsor Oil Co. No. 5-B Peters, Sur. 34. Loc.

Loma Novia—Duval County

Coffield & Lanning No. 1 Ritter, 330 ft. S line, 1,120 ft. W line, sec. 73. Cg. ahead 2,553 ft.

Duval Oil Corp. No. 30 Bishop, sec. 57. Drlg. plugs 2,574 ft.

Duval Oil Corp. No. 31 Bishop, sec. 57. Loc.

Eastern Texas Prod. Co. No. 5 Hubbard Sur. 71, R.U.

F. J. Gravis No. 2 Hahl, SE¼, NE¼, sec. 64. R.U.

Humble O. & R. Co. No. 19-A Hubbard, Sur. 83. Drlg. 2,821 ft.

Humble O. & R. Co. No. 14-B Hubbard, Sur. 42. Drlg. 2,210 ft.

Humble O. & R. Co. No. 23 Ruiz, Sur. 553. T.D. 2,780 ft.; swbg.

Humble O. & R. Co. No. 24 Ruiz, Sur. 553. Drlg.

Humble O. & R. Co. No. 25 Ruiz, Sur. 553. Sd. 2,773-80 ft.; comp.; 164 B.P.D.

Humble O. & R. Co. No. 26 Ruiz, Sur. 553. D.&A. 2,629 ft.

Humble O. & R. Co. No. 28 Ruiz, Sur. 553. Drlg. 1,893 ft.

Magnolia Pet. Co. No. 12 Herbst, Sur. 70. T.D. 2,743 ft.; comp.; 40 B.P.D.

Texas Oil Co. No. 4-A Hubbard, Sur. 71, M T M

Texas Co. No. 21 Bishop, sec. 59. Comp.; 15 B.P.H.; T.D. 2,582 ft.

Texas Co. No. 22 Bishop, Sur. 57. Drlg. 140 ft.

Lopez—Webb—Duval Counties

Cox & Hamon No. 5 Peters-Coates, Sur. 322. T.D. 2,157 ft.; comp.; 12 B.P.H.

Cox & Hamon No. 6 Peters-Coates, Sur. 322. T.D. 2,177 ft.; comp. 12 B.P.H.

Humble O. & R. Co. No. 11-C D.C.R.C., Sur. 901. Set csg. on sd. 2,100 ft.; comp.; 10 B.P.H.

Humble O. & R. Co. No. 12 D.C.R.C., Sur. 901. Set csg. on sd. 2,088 ft.; W.O.C.

Hunter Co. No. 2-B Billings, Sur. 113. R.U.

C. F. Lewis No. 9-A Lopez, sec. 110. Drlg. 2,086 ft.

Mills Bennett Prod. Co. No. 5-A Lopez, Sur. 111. T.D. 2,256 ft.; comp.; 12 B.P.H.

Mortimer & Springer No. 24-B Peal, Sur. 796. T.D. 2,191 ft.; comp.; 18 B.P.H.

Mortimer & Springer No. 25-B Peal, Sur. 796. T.D. 2,183 ft.; comp.; 18 B.P.H.

Sierra Oil & Roy. Co. No. 3 Billings, Sur. 113. Drlg. 2,706 ft.

Lowe Ranch—Duval County

Atlantic Ref. Co. No. 1 Lowe, 330 ft. E line, 1,678 ft. SW of NE cor., Sur. 466. R.U.

Palangana—Duval County

F. J. Gravis No. 2-A Schallert, Sur. 255. R.U.

Penn Palangana Oil Co. No. 3 C. K. Gravis, Sur. 250. R.U.

Peters—Duval County

Rio Bravo Oil Co. & Coates No. 2-C Peters, Sur. 398. Drlg. 2,607 ft.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 12 D.C.R.C., 1,650 ft. S and E lines, sec. 100. Set csg. 1,971 ft.; comp.; 240 B.P.D.

Magnolia Pet. Co. No. 13 D.C.R.C., sec. 100. Drlg. 267 ft.

Sarnosa—Duval County

Humble O. & R. Co. No. 4 Arnstine, Sur. 130. T.D. 2,456 ft.; D.&A.

Seven Sisters—Duval County

A. J. Brinkdeter No. 1 Garcia, Sur. 212. Drlg. 1,362 ft.

Dulce Oil Co. No. 5 Serna, Sur. 384. Tstg. sd.; T.D. 2,496 ft.

Humble O. & R. Co. No. 5 Dowdy, sec. 272. Set 5½-in. csg. on sd. 2,550 ft.; fsg.

Humble O. & R. Co. No. 45 Smith, Sur. 382. T.D. 2,465 ft.; comp.; 480 B.P.D.

Relience Oil & Roy. Co. No. 1-A Lichtenberger, sec. 225. T.D. 2,720 ft.; reworking for completion.

Relience Oil & Roy. Co. No. 2 Lichtenberger, S½, sec. 225. Loc.

Texas Co. No. 13 Badgley, Sur. 307. Drlg. 1,420 ft.

Westheimer & Daube No. 30 Campos, Sur. 224. Cg. 2,708 ft.

Sweeden—Duval County

Hiawatha O. & G. Co. No. 1 Herberger, 330 ft. S and W lines, sec. 10, Agua Poquita Gr. Drlg. 5,120 ft.

Hiawatha O. & G. Co. No. 1 Miller, 330 ft. N and E lines, sec. 24, Agua Poquita Gr. 4-min. D.S.T. 5,868-87 ft.; tool slpd.; rec. 480 ft. gas-cut mud; odor oil; to retest.

Pearsall—Frio County

Amerada Pet. Corp. No. 8 Halff & Oppenheimer, S. A. Ditch Sur. 1,104 (W.O.). Drlg. 7,062 ft.

North Pettus—Goliad-Karnes Counties

Diamond Halff Oil Co. No. 1-C Gillette, 745-ac. tr., J. Gomez Sur. Sd. 3,668-3,876 ft.; completing.

Jane Oil Co. No. 6 Smith, B.&B. Sur. No. 25. T.D 3,727 ft.; set 5½-in. csg. 3,712 ft.; S.D.

Magnolia Pet. Co. No. 13 Porter, 330 ft. SE line lse., 660 ft. NE of No. 6, B.&B. Sur. 23. Tstd. oily mud 3,718-32 ft.

Clark—Guadalupe County

Diamond Halff Oil Co. No. 2 Larison, G. DeWitt Sur. Spudded.

D. Mulholland No. 1 Johns, J. K. Davis Sur. Spudded.

Darst Creek—Guadalupe County

Diamond Halff Oil Co. No. 1 Bibbs, Robinson Sur. Cg. 2,562 ft.

Freeman Oil Co. No. 3 Larrison, G. DeWitt Sur. 13. Loc.

Riddle Oil Co. No. 1 Williams, G. DeWitt Sur. R.U.

V. G. Schimmel No. 2 Grimm, Dewitt Sur. T.D. 2,525 ft.; W.O. pump.

Nolte—Guadalupe County

Riddle Oil Co. No. 1 Herff, Gortari Sur. No. 76. Set csg. 20 ft.; W.O.C.

Riddle Oil Co. No. 2 Nolte, Lowell Sur. 16. R.U.

Wheelock & Collins No. 1 Warnecke, 335-ac. tr. R.U.

Sal Mar—Guadalupe County

Perot Oil Corp. No. 1 Priestly, Williams Sur. 46. Sat. chalk 2,006½-9 ft.; drlg. plugs.

LaBlanca—Hidalgo County

Gulf States Oil Co. No. 3 Engleman, Lot 3, Blk. 70, Las Mestanas Gr. (workover). T.D. 8,123 ft.; set csg. on bottom; to pref. 8,004-86 ft.

Sterling O. & R. Co. No. 1 Engleman, 660 ft. N and E lines, Lot 8, Blk. 95. Set sur. csg. 1,250 ft.; drlg. 6,697 ft.

Mercedes—Hidalgo County

Union Sulphur Co. No. 7 American Rio Grande, Tr. 2,309, Blk. 59, (workover), perf. csg. 7,481-91 ft.; P.B. 7,592 to 7,513 ft.

Samfordyce—Hidalgo-Starr Counties

Cosmo Petroleum Co. No. 1 Guerra, Sh. 254, Porc. 40. Drlg. 570 ft.

Harrison & Danvers, Inc., No. 1 Pena, 16.5-ac. tr., Tr. 250, Porc. 38. Cg. 2,943 ft.

Henshaw Bros. No. 1 Elizando, Porc. 39. Sd. 3,678-82 ft.; S.G.; set csg. 3,110 ft.; perf. 3,064-74 ft.

Val-Tex Oil Co. No. 2 Chapa, Tr. 250, Porc. 39. Set csg.; T.D. 3,008 ft.; perf. 2,944-46 ft.; washing in.

Young & Bonnear No. 1 Diaz, Tr. 331, Porc. 40. Set sur. csg. 212 ft.; W.O.C.

Alworth—Jim Hogg County

French Oil Co. No. 2 Garza, Blk. 1, Sur. 269. Sd. 1,033-35 ft.; set csg.; S.G.

Randado—Jim Hogg County

J. W. Adams No. 1 Allen, B.G.&F. Sur. 48. Drlg. 513 ft.

Bentonville—Jim Wells County

Tom Graham No. 2 Luby, Share 4, Los Presnos de Abajo Gr. Rng. csg. 5,793 ft.

Stanolind O. & G. Co. No. 1 Bird, de la Garcia Gr. Set csg. 5,835 ft.

Stanolind O. & G. Co. No. 2 Pope, sec. 13, King Farm Lots. Sd. 5,688-93 ft.; set csg. to perf. 5,660-65 ft.

West Premont—Jim Wells County

Diamond Halff Oil Co. No. 1 Peterson, Lots 104-105, sec. 76, Loc.

Tom Graham No. 3-A Bennett, C Lots 72 and 73, sec. 76. Set csg. on sd. 2,266 ft.; perf. 2,260-65 ft.; completing.

Tom Graham No. 4-A Bennett, Lots 56 and 57, sec. 76. Drlg.

Tom Graham No. 2 Johnson, Lot 76, Sur. 215. Sd. 2,349-54 ft.; comp.; 168 B.P.D.

Tom Graham No. 1 Laughlin, sec. 76. Sd. 2,257-69 ft.; perf. 2,257-65 ft.; comptg.

Tom Graham No. 1 L. E. Seeligson, cen. Lots 81 and 96, sec. 77. Perf. 2,044-50 ft.; comp.; 129 B.P.D.

Tom Graham No. 1-A Singer, Lots 71 and 74, sec. 76. Perf. 2,250-57 ft.; comp.; 113 B.P.D.

W. F. Morgan No. 2 Laughlin, Tr. 7 and 10, sec. 76, Sur. 231. R.U.

Richardson, Ware & Richardson No. 1 Miller, cen. Lots 40 and 41, Holdeman Subd., sec. 71. Drk.

Securities Royalty Co. No. 1 Miller, Lots 40 and 41, sec. 231. Drlg. 1,017 ft.

S. J. Sloan No. 1 Nash, Lot 102, Holdeman Subd., sec. 75. Set csg. 2,350 ft.; W.O.C.

Sandia—Jim Wells County

O. W. Killam No. 1-B Wade, Lopez de Jean Gr. Loc.

J. E. Walsh No. 2 Wade, Lot 2, Blk. C, Bode Subd. Stdg. 2,875 ft.; prep. resume drlg.

Kingsville—Kleberg County

Great States Oil Co. No. 1 Kivlin, Blk. 4, sec. 39. S.D. 2,485 ft.

Oakville—Live Oak County

Simmons O. & G. Co. No. 2-B Reagan Hrs., 451-ac. tr. T.D. 2,809⅓ ft.; comptg.

Calliham—McMullen County

S. P. Lightfoot No. 9 Lark, Blk. 118, Scrugham Sur. Loc.

Ina—Medina County

Ina O. & R. Co. No. 3 Viola Wilson, Durst Sur. S.D. 742 ft.

Agua Dulce—Nueces County

Invincible Oil Co. (Lockhart Bros.) No. 1-B Elliff, 406 ft. S and W lines, 160-ac. tr., Longorio Gr. R.U.

Lockhart Bros. No. 1 Elliff, 4,501 ft. E line, 466 ft. S line, 3,054.9-ac. tr., Antonio Longorio Gr. Sd. and sh. 6,863-67 ft.; T.D. sh. 6,912 ft.; perf. csg. 6,410-20 ft.; cleaning gas and dist. in pits; flwg. 20 B.P.D.; comp.; 6 B.P.H. distillate on ½-in. ck.; T.P. 1,650 lbs.; C.P. 2,100 lbs.

Stoddart & Moss No. 1 Colman, 330 ft. NW and NE lines, SE¼ SW 330-ac. tr., sec. 206. S.D. 6,885 ft.; blew out and closed in; to attempt comp. through drill stem; S.D.

Texon Drlg. Co. No. 2-B Sevier, 880-ac. tr., W. W. Chapman Lds., Palto Alto Gr. Set 16-in. csg. 300 ft.; T.D. 5,867 ft.; cutting stuck D.S.

United Prod. Co. No. 1 Harvey, 1,100 ft. W line, 1,050 ft. N line, tr., M. Garza Sur. Drlg. 6,567 ft.

Clara Driscoll—Nueces County

Hiram Reed No. 2 Roper, C Lot 1, sec. 108. Perf. 3,901-05 ft.; gas and wtr.; to P.B. and perf. in 3,800-ft. sd. W.O.W.

Houston Oil Co. No. 1 Sevier, 330 ft. S and W lines, 77.1-ac. tr., Quadrilla Irr. Co., Sur. Loc.

Magnolia Pet. Co. No. 2 Sevier, 330 ft. S and W lines, 80-ac. tr., R. Russell Sur. Drlg. 4,527 ft.

Texas Co. No. 1 C. D. Sevier, Wm. Gambel Sur. Drlg. sh. 4,842 ft.

Wellington Oil Co. No. 14 Sevier, 254.7-ac. tr., Wm. Gambel Sur. No report.

Flour Bluff—Nueces County

Humble O. & R. Co. et. al. No. 1 Gulden, Lot 30, Blk. 47. T.D. sd. 6,655 ft.; rng. csg.

Humble O. & R. Co. et al No. 2-A Miller, Blk. 25, sec. 47. T.D. sd. 6,670 ft.; comp. 162.77 B.P.D. on ⅛-in. ck.; sd. 6,630-70 ft.

Humble O. & R. Co. et al No. 3-A Miller, Lot 20, Blk. 56. Drlg. L. 1,049 ft.

Humble O. & R. Co. et al No. 3-B Miller, Lot 4, Blk. 48. Drlg. 6,359 ft.

Humble O. & R. Co. et al No. 6 Phillips, Lot 11, Blk. 55. T.D. sd. 6,656 ft.; comp. 163.45 B.P.D. on ⅛-in. ck.; sd. 6,629-56 ft.

Humble O. & R. Co. et al No. 7 Phillips, Blk. 14, sec. 55. Drlg. sh. 462 ft.

Humble O. & R. Co. et al No. 1 Ritter, Lot 25, Blk. 55. Drlg. sh. 5,497 ft.

Humble O. & R. Co. et al. No. 1-A Solar Sevier, Blk. 13, sec. 47. Drlg. sh. 6,618 ft.

S. Paul No. 1 Moulter, Blk. 16, sec. 41, Encinal Garden tracts, Loc.

London—Nueces County

Cosner & Cosner No. 1 Stockton, 330 ft. N and E lines, SW¼, NE¼, sec. 25, D.S.T. 4,703-19 ft.; rec. gas and 200 ft. oil mud; W.P. 10 lbs. 7 min.; fsg.

Cosner & Cosner No. 2 Stockton, 330 ft. S and E lines, SW¼, NE¼, sec. 25, Loc.

Crown Central Pet. Corp. No. 1 Stockton, 330 ft. S and E line, NW¼, NE¼, sec. 25. Loc.

Gem Oil Co. No. 1 Stockton, 330 ft. N and W line, SE¼, NE¼, sec. 25. Set sur. csg.; W.O.C.

Saxet Heights—Nueces County

W. C. Brady No. 1 Guy, C Lot 45, Country Club Addn. Sd. 4,039-83 ft.; set csg.; W.O.C.

W. C. Brady, trustee No. 1 Hartley, 4-ac. tr., Ehlers Gardens Trs. Drlg. 1,226 ft.

W. C. Brady, trustee No. 1 London, cen. Lot 1, Ellendale Gardens, No. 3. Drk.

Callihan Bros. and Whitley No. 1 Hartley, Villareal Sur. R.U. and S.D.

Harrison Drlg. Co. No. 1 Simms, 4-ac. tr., Villareal Gr. Drlg. 3,026 ft.

W. N. Paul No. 2 Schallert, C Blk. "C," Harbor View Addn. S.D. 1,800 ft.; W.O.

Pedernal Oil Co. No. 1 John, Blk. 14, Oak Park Addn. S.D. 4,110 ft.; orders.

Potter Pipe Line Co. No. 4 Cohen, 102 ft. S line, 450 ft. E line, 15-ac. tr., Villareal Sur. Top sd. 4,065 ft.; T.D. 4,100 ft.; set csg.; W.O.C.

Ben F. Smith No. 1 Snowden, 13-ac. tr., Villareal Sur. R.U.

Taylor Pet. Co. No. 7 Country Club, 53-ac. tr., Villareal Sur. T.D. 7,250 ft.; sd. 7,-242-50 ft.

Taylor Pet. Co. No. 1 Kaler, 10-ac. Villareal Sur. Loc.

S. E. Wilson No. 1 C. C. Nat. Bank, C Lot 10, Blk. 9, Oak Park Addn. Drk.

S. E. Wilson No. 1 fee, Blk. 2, Oak Park Addn. Sd. 4,070-79 ft.; set 5-in. csg. 4,070 ft.

Saxet—Nueces County

C. Andrade & Renwar Oil Co. No. 7 Fran' Sur. 416. T.D. 5,821 ft.; set csg.; W.O.C.

Benson Drlg. Co. No. 1 Morgan, 330 ft. N and W lines, 40-ac. tr., Sur. 315 (W.O.) Old T.D. 4,483 ft.; R.U. to D.D.

Dentex Oil Co. No. 5 Harmon, 330 ft. S and W line, 50-ac. tr., Sur. 416. Set csg. 112 ft.; W.O.C.

R. B. Bryant No. 1 Gallagher, Sur. 25 T.D. 5,004 ft.; D.&A.

Conservative Oil Co. No. 1-A R. Morgan 80-ac. tr., Sur. 315. Set csg. on sd. 4,451-54 ft.; sdtrk. hole.

Conservative Oil Co. No. 3-B Morgan, Sur. 403. Drlg. 6,840 ft.

A. D. Corgey No. 1 Page, 330 ft. S and E lines, 20-ac. tr., Sur. 716. Set condr. csg.; W.O.C.

Crown Central Pet. Corp. No. 6-A Morgan, Sur. 315. Sd. 4,445-50 ft.; swbg. in.

Crown Central Pet. Corp. No. 7-B Morgan, 80-ac. tr., Surs. 315 and 592. Sd. 4,450-53 ft.; rng. tbg. to comp.

Donico Prod. Co. No. 2 Dounigan, 330 ft. W line, 2,004 ft. S line, 80-ac. tr., sec. 7, Rge. 6, Kinney Lds. Drlg. 2,736 ft.

L. Glasscock No. 2 Johns, 20-ac. tr., MacGregor Sur. 582. M.I.M.

L. Glasscock No. 3 Hunter, 990 ft. N line, 330 ft. W line, 160-ac. tr., Dunn Sur. 312. Blew out; shut in; drlg. 5,026 ft.

Great States Oil Co. and Violet Oil Corp. No. 7 McGregor-Belk, Sur. 311. D.S.T. 6,318-26 ft.; recd. 1,000 ft. oil, 90 ft S.W.; sd. 6,208-26 ft.; set csg. 6,326 ft. cleaning into pits.

W. H. Harrison Drlg. Co. No. 1 Taggert, 50-ac. tr., Sur. 401. Drlg. 1,728 ft.

Hiawatha O. & G. Co. No. 1 Hutchins Stillwell, Lot 34, Sheppard Lds. Perf 5,850-56 ft.; comp.; 124 B.P.D. on ½-in. ck.

Hiawatha Oil Co. No. 9 Hutchins-Stillwell, Lot 34, Sheppard Lds. Sd. 5,833-47 ft. S. O.; recementing perf. at 5,833½-45½ ft.

Houston Oil Co. No. 2 fee, Sur. 582. Drk.

Houston Oil Co. No. 12 McGregor, 135-ac. tr., Sur. 582. T.D. 5,826 ft.; rng. csg.

Houston Oil Co. No. 18 Morgan, sec. 7 Rge. 5. T.D. 4,424 ft.; comp.; 216 B.P.D. on 3/16-in. ck.

Houston Oil Co. No. 19 Morgan, 493.63-ac. tr., sec. 7, Rge. 5. Drlg. sh. 2,689 ft.

Houston Oil Co. No. 20 Morgan, 493.63-ac. tr., sec. 7, Rge. 5. Drlg. sh. and L. 3,027 ft.

H. H. Howell No. 2 Hutchins, 80-ac. tr. Sur. 416. Sd. 6,711-28 ft.; set csg. 6,720 ft.; perf. 6,680-87 ft.; comp.; 6 B.P.H. on ½-in. ck.; perf. 5,258-61 ft.

H. H. Howell No. 3 Hutchins, 80-ac. tr., Sur. 416. Loc.

H. H. Howell No. 1 R. Morgan, Blk. 7 Roberts Subd., Sur. 415. Sat. sd. 6,735-42 ft.; set csg.; W.O.C.

Maryland Corp. No. 6 Morgan, Sur. 592 Perf. csg. 4,422-26 ft.; swbg.

Maryland Corp. No. 1 Stillwell-Sagarin 4.4-ac. tr., Sur. 500. T.D. 6,338 (cor.) S.D.; prep. perf. 6,304-07 ft.; comp.; no gauge.

Mills Bennett Prod. Co. No. 2 Ardner, 210-ac. tr., Sur. 410 (W.O.). T.D. 4,227 ft.; set csg. 4,133 ft.; swbg. in.

Morgan & Chapman Minerals No. 6 Morgan Clark, NE¼, Sur. 405. Cg. 6,927 ft.

North Star Oil Co. No. 7 R. Morgan, W½ SE¼, Sur. 405 (workover). O.T.D. 5,87' ft.; to D.D. to 8,000 ft.; sd. 6,747½-64 ft.; set csg. 6,764 ft.; drlg. plugs.

Pan American Prod. Co. No. 3-A Morgan 89-ac. tr., Sur. 403. Sd. 5,823-27 ft.; set csg. 5,827 ft.; W.O.C.

Pan American Prod. Co. No. 5-A Sagarin 59-ac. tr., Sur. 403. Cg. 5,785 ft.

Pan American Prod. Co. No. 4 Solar Sevier, 40-ac. tr., Sur. 582. Sd. 6,235-73 ft.; set csg. 6,273 ft.; drlg. plugs.

Perry & Reed No. 1 fee, 30.4-ac. tr., Villareal Gr. Set sur. csg.; W.O.C.

Phillips Pet. Co. No. 5 Hutchins, 60-ac. tr., Blks. 29 and 30, Sheppard Farm Lots (W.O.). Oil sd. 6,891-6,901 ft.; set csg.; T.D. 6,949 ft.; W.O.C.

Port Oil & Gas Co. No. 1 Cox & Cryder, 72-ac. tr., Gallagher Sur. 166. Cg. 3,-189 ft.

Republic Nat. Gas Co. No. 4-A Donigan 240-ac. tr., secs. 6 and 7, Rge. 6. T.D. 4,629 ft.; perf. 4,228-35 ft.; completing.

Republic Nat. Gas Co. No. 18 Dunn, 57.7-ac. tr., Blk. 38, Sheppard Farm Lots Drlg. 3,926 ft.

Republic Nat. Gas Co. No. 2 Hutchins, 40-ac. tr., sec. 9, Rge. 5. Tstd. S.W. 4,833-70 ft.; set csg.; W.O.C.

Republic Nat. Gas Co. No. 3-A Morgan, sec. 405. Drlg. 1,780 ft.

Richardson Pet. Co. No. 3 Cain & Secrist, 440-ac. tr., Russell Farm Lot 23. T.D. 4,100 ft.; sdtrkd. 1,200 ft.

Richardson Pet. Co. No. 10 Cain & Secrist, Blk. 23, Russell Farms. R.U.

Richardson Pet. Co. No. 1 Erwin, 5.8-ac. tr., Sur. 500. R.U.

Richardson Pet. Co. No. 5 Perkins-La-Gasse, Blk. 26, Sheppard Farm Lots. Sd. 6,725-34 ft.; set csg. 6,764 ft.; comp.; 170 B.P.D. on 5/32-in. ck.

Richardson Pet. Co. No. 7 Quiros, Blk. 40, Sheppard farm Lots. Drlg. 4,434 ft.

Richardson Pet. Co. No. 9 Quiros, Blk. 36, Sheppard Lots. Drlg. 5,026 ft.

Richardson Pet. Co. No. 4 Sedwick, 185.4-ac. tr., Sur. 586. Set csg. 4,860 ft.; W.O.C

Southern Minerals Corp. No. 20 Bliss, 120-ac. tr., Sur. 416. Drk.

Southern Minerals Corp. No. 5 Mastin, Sur. 416. Cg. 6,813 ft.

Southern Minerals Corp. No. 13 Smith, Blk 4, Sheppard trs. Set sur. csg.; W.O.C.

Southern Minerals Corp. No. 2 Till, 52-ac. tr., Page Lds. Sur. D.&A. 4,893 ft.

Texon Drlg. Co. No. 5 Vance, Thos. Gallaugher Sur. Cg. 4,597 ft.

Stratton—Nueces County

Camp Prod. Co. No. 1 Wordner, 330 ft. B line, 1,280 ft. N line, sec. 12, Stratton Subd. Drlg. 2,606 ft.

Plymouth—San Patricio County

Magnolia Pet. Co. No. 12 C. C. Bank, 466 ft. N and E lines, Fessenden Sur. Loc.

Plymouth Oil Co. No. 65-C Welder, sec. 71 T.D. 6,900 ft.; stdg.

Plymouth Oil Co. No. 68-C Welder, sec. 71. Oil sd. 5,628-44 ft.; set csg.; W.O. perforator.

Plymouth Oil Co. No. 69-C Welder, sec. 71. Set csg. 5,645 ft.; comp.; no gauge.

Plymouth Oil Co. No. 70-C Welder, sec. 71. Drlg. 5,534 ft.

Stanolind O. & G. Co. No. 2 C. C. Banks, sec. 24, Fourth Addn. Spudded.

Sun Oil Co. No. 5 Rossen, Lots 2 and 7, sec. 23, Fourth Addn. T.D. 5,646 ft.; comp.; 135 B.P.D. on 9/64-in. ck.

Taft Field—San Patricio County

Atlantic Ref. Co. No. 3 Pullin, 330 ft. N line, 380 ft. W line, 40-ac. tr., Lot 4 sec. 1, Second Addn. R.U.

Cage Prod. Co. No. 7 Mayo, 9,560 ft. W line, 990 ft. S line, 60-ac. tr., Ottmar Sur. Loc.

Conroe Drlg. Co. No. 8 Pullin, 40-ac. tr., Wm. Burns Sur. Sd. 4,355-66 ft.; tstg.

Esues Oil Co. No. 4 Britton, Lot 8, sec. 6, Third Addn. Set csg. 4,008 ft.; completing.

Esues Oil Co. No. 6 Britton, Lot 8, sec. 6, Second Addn. Sd. 4,912-17 ft.; rng. csg.

Humble O. & R. Co. No. 3 Flynn, sec. 1, Second Addn. Set csg. 4,989 ft.; perf. 3,-980-85 ft.; washing.

Humble O. & R. Co. No. 17 Mayo, Ottman Sur. Drlg. 2,673 ft.

White Point—San Patrico County

Crown Central Pet. Corp. No. 1 White Point Dev. Co., 100-ac. tr. D.S.T. 4,888-4,905 ft.; rec. 2,100 ft. oil; 10 ft. sd. and S.W. 30 lbs. W.P. 15-min.; sd. 4,-900-05 ft.; set csg. 4,888 ft.; flowing 10 B.P.H. fluid 85% S.W.; comp.; 5 bbls. oil, 45 bbls. S.W. per hr. on 1-in. ck.

Alta Vista—Starr County

Moss & Heard No. 3 Ricaby, Porc. 83. J. of Camargo. Oil sd. 1,315-20 ft.; tstg.

Barbacoas—Starr County

K. E. Merren et al No. 1 S.C.C.C., Blk. 34. Porc. 89. Drlg. sdy. sh. 2,065 ft.

Los Olmos—Starr County

Mitchell & Stone No. 2 Bass, Sur. 8, Porcs. 75, 76, 77. D.&A.; T.D. 372 ft.

H. C. Owens No. 1 Ivey, Porc. 87. R.U.

St. Marys O. & G. Co. No. 1 Seabury, Porc. 87. Drlg. 432 ft.

Ted Stone No. 1 Kelsey-Bass, Porc. 9[illegible] of Camargo. Set 6-in. csg. 393 ft.; S.D.

Rio Grande City—Starr County

Clopton & Reed No. 1 Green, Porc. 80. Drlg. sd. 3,112 ft.

Clopton & Reed No. 4 Tijerina, Lot 12, Sh. 14-C, Porc. 80. Drlg. sd. 1,039 ft.

Aviator—Webb County

Joe Palmer No. 1 Garcia, Sur. 463. R.U.

Cole—Webb County

O. W. Killam No. 49 Bruni, Blk. 5, Sur. 3. T.D. 2,958 ft., tested oil.

O'Hern—Webb County

Hamil & Smith No. 4-A Benavides, Sur. 585. Drlg. 846 ft.

Hamil & Smith No. 21 Benavides, Hale Subd. Comp.; 8 B.P.H.; T.D. 2,937 ft.

Hamil & Smith No. 22 Benavides, Blk. 504. Set csg. 2,941 ft.; W.O.C.

Hamil & Smith No. 28 Benavides, Blk. 498, Hale Subd. Set csg. 2,941 ft.; W.O.C.

Hamil & Smith No. 29 Benavides, Blk. 497, Hale Subd. Cg. 2,932 ft.

Magnolia Pet. Co. No. 21 S. Benavides, Blk. 13, Sur. 174. Tested 25,000 ft. gas 2,329-49 ft.; P.B. 2,679-86 ft.; D.&A.

Magnolia Pet. Co. No. 22 S. Benavides, Blk. 5, O'Hern & Seacord Subd. Drlg. 377 ft.

J. J. O'Hern No. 1-C Benavides, Hale Subd. Drlg. 177 ft.

H. J. Porter No. 1 Bruni, Blk. 585. T.D. 2,959 ft.; D.&A.

H. M. Reed No. 4 Benavides, Blk. 295 Hale Subd. Swbg. 2,916 ft.

Starr Dev. Co. No. 1 Benavides, 330 ft. N and W lines, Sur. 173. M.I.M.

Sun Oil Co. No. 5-A Benavides, Blk. 508. Set csg. 2,531 ft.; W.O.C.

Sun Oil Co. No. 8-A Benavides, Blk. 507. Drlg. 2,716 ft.

Texas Co. No. 5-A Benavides, Blk. 375. Comptg.; T.D. 2,913 ft.

LaSal Vieja—Willacy County

Shell Pet. Corp. No. 1 Yturria, sh. 64, Carricitos Gr.; (W.O.). Drlg. 7,712 ft.

Charco Redondo—Zapata County

W. C. Bob No. 2 Martinez, S¼, Blk. 29 Quandudo Grant. Sd. 670-72 ft.; set csg.; W.O.C.

Cuellar—Zapata County

Magnolia Pet. Co. No. 4 Cuellar, Sur. 245. Cg. 1,263 ft.

Escobas—Zapata County

Texas Co. No. 96 Jennings, Cerrito Blanco Gr. T.D. 1,507 ft.; D.&A.

Zapata Corp. No. 11 Garza, Blk. 22, Douglas Subd. T.D. 1,170 ft.; comp.; 60 B.P.D.

Haynes—Zapata County

J. D. Long No. 1 Phelps, Villa Gr. R.U

Magnolia Pet. Co. No. 26 Haynes, Blk. 7, Haynes Subd. Set csg. 1,168 ft.; W.O.C.

Magnolia Pet. Co. No. 28 Haynes, Blk 7, Haynes Subd. T.D. 1,188 ft.; comp.; 50 B.P.D.

Magnolia Pet. Co. No. 23 Haynes, Blk. 7, Haynes Subd. Drlg. 597 ft.

Valley Osage Oil Co. No. 13 Haynes, Blk. 14, Haynes Subd. Loc.

Lopena—Zapata County

Dalport Oil Corp. No. 1 Vela, Porc. 20. Loc.

Venture Pet. Co. No. 2 Ramerez, Blk. 3, Porc. 18. Loc.

Wm. H. Winn No. 1 Carlos Vela, Blk. 6, Porc. 20. Set csg. 2,370 ft.; W.O.C.

E. C. TEXAS WILDCATS

Anderson County

American Liberty Oil Co. No. 1 G. E. Gauge, Blackfoot area, B. Gilbert Sur. Drlg. 6,275 ft.

Tide Water Oil Co. et al No. 7 Monnig, S. Sanchez Sur., deep test, Long Lake field. Drlg. 7,600 ft.

Angelina County

Ginter & Brown No. 2 Cope heirs, Jose Morin Sur., 3 mi. E of Dibol. R.U.

Hicks et al No. 1 Morris, J. Morris Sur., 3 mi. E of Dibol. S.D. 2,167 ft.

B. F. Hoffman No. 1 So. Pine Lbr. Co., B. J. Thompson Sur., C of SE¼ of Blk. 11, NE of Dibol. Cg. 2,075 ft.

G. T. Van-Hull No. 1 W. D. Ivy, 10-ac. tr., W. D. Welch Sur., E of Dibol. Cg. 1,470 ft.

Cherokee County

A. F. Richardson No. 1 F. P. O'Brien G. S. Clapp Sur., 3 mi. NW of Rusk; 5,000-ft. test. Loc.

Dallas County

Mauldin Oil Co. No. 1 W. E. Howell, S Layton Sur., 8 mi. E of Grapevine, 6 mi. W of Longmire. S.D.

Falls County

A. H. Bell et al No. 1 C. L. Trice, F. Mayham Sur., 1 mi. E of Lott. S.D. 1,220 ft.; Thirteen Oil Co. No. 1 H. R. Roberts, N. Slatter Sur., 6 mi. SE of Lott, Pecan Gap 1,480 ft.; S.D. 2,143 ft.

Fannin County

Joiner & Owens No. 1 Goss-Morgan, J. Stephens Sur., 16 mi. N of Honey Grove. S.D. 2,810 ft.

Henderson County

Tide Water et al No. 1 McElreath & Suggett, Basa Pecan 2,730 ft.; drlg. 2,835 ft.

Hunt County

Penn Oil Corp. No. 1 R. B. Parish, C 100-ac. tr., N. Dauley Sur., 7 mi. NE of Lone Oak. Drk.

Texola Land Corp. No 1. J. M. Goin, Jas. Merrick Sur., 2 mi. SW of Wolfe City. S.D. 40 ft.

Kaufman County

Scott & Woodside No. 1 W. and T. Nash, in J. Cortez Sur., 1 mi. E of Scurry. M.I.R.

Lamar County

Lowery-Cutler No. 1 E. C. Porter, Thos. King Sur. Top Georgetown 354 ft.; S.D. 1,647 ft.; (cor.).

Limestone County

A. W. Phillips et al No. 1 E. M. Speight. M. Herrin Sur., 6½ mi. SE of Mexia. S.D. 3,695 ft.

Pure Oil Co. No. 16-T Kendrick, P. Varella Sur., Mexia field. R.U.

Red River County

Carpenter Oil Corp. No. 1 J. M. Roberts. J. Ware Sur., 10 mi. NE of Clarksville. Drlg. 1,206 ft.

Roy I. Carter Drlg. Co. No. 1 J. A. Tutt. C 40-ac. tr. in D. Hart Sur., 2 mi. S of Avery. S.D. 80 ft.

Robertson County

J. E. Mills No. 1 T. Congelosi, G. A. Nixon Sur., 3½ mi. SW of Hearne. Skidded rig 40 ft. S.

Titus County

J. Z. Werby et al No. 1 Williams, 2 mi. E of Talco field, M.E.P.R.R. Sur. Cg. 5,950 ft.

Van Zandt County

Humble O. & R. Co. No. 1 L. K. Riggs, W. Daniels Sur. Deep test. Drk.

Stroud & Lowe No. 1 P. L. McNeill, J. W. Guest Sur., 4 mi. N of Ben Wheeler. S.D. 20 ft.

EAST TEXAS

(Border Counties)

Bowie County

Ferguson & Hill No. 1 Breckenridge, N. Dysas Sur. Drlg. 2,210 ft.

Sutton-Hawkins No. 1 McDuffey, John Ball Sur. Drlg. 3,722 ft.

Cass County

American Liberty No. 1 B. E. Echlos, H. Holbert Sur. Loc.

Frank DeMayo No. 1 W. D. Chew, Robt. Trammel Sur. 7-in. cmtd. 5,979 ft.; T.D. 6,010 ft.; W.O.C.S.

Gulf Oil No. 4 Dawson, J. H. Rives Sur., NW cor. lse. Drlg. 4,611 ft.

Magnolia No. 3 Allday Est., P. Evans Sur. Loc.

Magnolia No. 11 J. E. George, John Collum Sur. Loc.

Magnolia No. 13 J. E. George, John Collum Sur. Loc.

Magnolia No. 1 Hayer & Thatcher, Jacob Carsner Sur. Drk.

Magnolia Pet. Co. No. 7 L. Haywood, P. Evans Sur., SW of No. 3. Comp.; flw. 431 B.P.D.; T.D. 5,955 ft.

Magnolia Pet. Co. No. 8 L. Haywood, P. Evans Sur., NE of No. 2. 7-in. cmtd. 5,902 ft.; T.D. 5,920 ft.; W.O.C.S.

Magnolia No. 9 L. Haywood, P. Evans Sur., SE cor. Loc.

Magnolia No. 10 L. Haywood, SW cor. lse., P. Evans Sur. Loc.

Magnolia No. 11 L. Haywood, SE cor. P. Evans Sur. Loc.

Magnolia No. 12 L. Haywood, SE cor. P. Evans Sur. Loc.

Magnolia No. 13 L. Haywood, SE cor. P. Evans Sur. Loc.

Magnolia No. 14 L. Haywood, SE cor. P. Evans Sur. Loc.

Magnolia No. 15 L. Haywood, SE cor. P. Evans Sur. Loc.

Magnolia No. 16 L. Haywood, SE cor. P. Evans Sur. Loc.

Magnolia No. 17 L. Haywood, NE cor. P. Evans Sur. Loc.

Magnolia No. 18 L. Haywood, NE cor. P. Evans Sur. Loc.

Magnolia No. 19 L. Haywood, NE cor. P. Evans Sur. Loc.

Magnolia Pet. Co. No. 2 Lewis and Wicks No. 2. Cass Co. Sch. Ld. Sur., NW cor. tr. Comp.; flw. 521 B.P.D.; T.D. 6,132 ft.

Magnolia Pet. Co. No. 3 Lewis and Wicks, Cass Co. Sch. Ld. Sur., E of No. 2. 7-in. cmtd. 6,126 ft.; T.D. 6,150 ft.; W.O.C.S.

Magnolia Pet. Co. No. 4 Lewis and Wicks, Cass Co. Sch. Ld. Sur. Rng. 7-in.; T.D. 6,090 ft.

Magnolia Pet. Co. No. 5 Lewis and Wicks, Cass Co. Sch. Ld. Sur., E of No. 4. Drlg. 5,227 ft.

Magnolia Pet. Co. No. 6 Lewis and Wicks, Alex Archer Sur. 7-in. cmtd. 6,001 ft.; T.D. 6,037 ft.

Magnolia Pet. Co. No. 7 Lewis and Wicks, Alex Archer Sur. Drlg. 5,726 ft.

Magnolia Pet. Co. No. 1 J. B. McLeod, Cass Co. Sch. Ld. Sur., NW cor. sur. Loc.

Magnolia Pet. Co. No. 8 Meda Green, J. Davenport Sur. Rng. 7-in. csg.; T.D. 6,-007 ft.

Magnolia Pet. Co. No. 13 Meda Green, J. Davenport Sur. Drlg. 5,718 ft.

Magnolia Pet. No. 3 W. M. Hall, Wilson Robinson Sur. Drk.

R. W. Norton No. 1 Davis, H. Holbert Sur. Drlg. 5,541 ft.

R. W. Norton No. 2 Davis, H. Holbert Sur., NE cor. Drlg. 4,678 ft.

R. W. Norton No. 3 Davis, H. Holbert Sur. Drlg. 4,950 ft.

Ohio Oil Co. No. 13 R. P. Willis, S.F.I.W. Sur. No. 1,263. Loc.

Ohio Oil Co. No. 16 R. P. Willis, S.F.I.W. Sur. No. 1,263. Drlg. 2,061 ft.

Ohio Oil Co. No. 17 R. P. Willis, S.F.I.W. Sur. No. 1,263. Drlg. 760 ft.

Phillips Pet. Co. No. 5 Farrier, Wm. R. Myers Sur. 7-in. perf.; tstg.; T.D. 6,-150 ft.

Phillips Pet. Co. No. 7 Farrier, Wm. R. Myers Sur. Cg. 5,939 ft.

Phillips Pet. Co. No. 8 Farrier, Wm. R. Myers Sur. Drlg. 4,550 ft.

Texas Co. No. 6 W. M. Hall, A. Archer Sur. T.D. 6,065 ft.; tstg.

Texas Co. No. 7 W. M. Hall, Alex Archer Sur., NE cor. lse. Rng. 7-in. csg.; T.D. 6,065 ft.; W.O.C.S.

Texas Co. No. 8 W. M. Hall, Alex Archer Sur., NW cor. lse. Drlg. 5,900 ft.

Texas Co. No. 8 McLeod, W. A. Elliott Sur. Drlg. 810 ft.

Texas Co. No. 2 N. A. Rambo, Cass Co. Sch. Ld. Sur. Drlg. 200 ft.

Texas Co. No. 5 N. A. Rambo, Cass Co. Sch. Ld. Sur. Drlg. 3,795 ft.

Texas Co. No. 6 N. A. Rambo, Cass County Sch. Ld. Sur. Comp.; flw. 75 B.P.H.; T.D. 6,055 ft.

Texas Co. No. 7 N. A. Rambo, Cass Co. Sch. Ld. Sur. R.U.

United Prod. Co. No. 2 Bivens Unit, Jas. Davenport Sur. T.D. 6,021 ft.; S.D. W.O.

United Gas No. 3-A J. A. Blewey, H. Holbert Sur. Loc.

United Prod. No. 4 J. A. Bewley, H. Holbert Sur. 7-in. cmtd. 5,960 ft.; T.D. 6,-000 ft.

United Prod. No. 2-A J. H. Bewley, H. Holbert Sur. P.B. to 5,963 ft.; tstg.

United Prod. No. 6 G. W. Bibby Unit, Alex Archer Sur. Drlg. 4,396 ft.

United Prod. Co. No. 1 Bostick, J. Coleman Sur. Cg. 5,594 ft.

United Prod. No. 1 J. Q. Clements, Wm. B. Hughes Sur. Drlg. 4,791 ft.; (cor.).

United Prod. Co. No. 1 Davis Unit, Cass Co. Sch. Ld. Drlg. 5,710 ft.

United Gas No. 4 Bivens Unit, J. Davenport Sur. 9-in. cmtd. 2,100 ft.; W.O.C.S.

United Prod. Co. No. 1 J. W. Land, R. Potter Sur., SW cor. 100-ac. lse. Drlg 5,580 ft.

United Prod. No. 1 R. O. Long, W. Robinson Sur. 9-in. cmtd. 2,220 ft.

United Prod. Co. No 1 J. D. Parker, J. Coleman Sur. Drlg. 5,379 ft.

United Prod. No. 1 Terry Unit, R. Potter Sur. Drlg. 3,385 ft.

United Prod. No. 4 S. B. Willis, W. Robinson Sur. Drlg. 3,978 ft.

United Prod. No. 5 S. B. Willis, W. Robinson Sur. Drlg. 3,955 ft.

Vaughn Prod. Co. No. 1 Willis, S.F.I.W. Sur. 1263. Loc.

Vaughn Prod. Co. No. 2 Willis, S.F.I.W. Sur. 1,263. Drlg. 4,000 ft.

Harrison County

H. H. Alvord et al No. 1 M. A. Flannagan, L. Wormack Sur. R.U.

Geyer Oil Co. No. 1 Alex Moore, 5 mi. SW of Waskom, C. W. Fields Sur. Tstg.; T.D. 2,452 ft.

Geyer Oil Co. No. 2 Moore, C. W. Fields Sur. Loc.
Kennedy & Bachelor No. 1 Lane & Greer, J. L. Baker Sur. T.D. 2,336 ft.; prep. test.
H. H. Roberts et al No. 1 Z. Douglas, S Fields Sur. T.D. 2,485 ft.; prep. for prod. test.

Marion County

Arkansas-La. No. 1 W. S. Ford, Charles Grayson Sur., NE cor. Ford 204-ac. tr T.D. 6,181 ft.; flw. abt. 25 B.P.H.; tstg.
Arkansas-La. No. 1 Laura McIntosh, Edmondson Sur. Drlg. 4,715 ft.
Bauman, Dunn & Fischer No. 1 Chatten. A. D. S. Coy Sur., SE cor. Drlg. 4,-672 ft.
Cemo Oil Co. No. 1 Lucas, A. Castleberry Sur., Caddo field. Drk.
Holcomb & Thomason No. 1 Lizzie Henderson, 330 ft. S and E. cor. Blk. 18, of Lizzie Henderson Subd., or 2,800 ft. S 3,450 ft. E of NW cor. of R. Bennington Sur. T.D. 5,996 ft.; swb. and flow abt. 140 B.P.D.; tstg.
Sam Lanier No. 1 Lucey Rives, SE cor M. G. Wall Sur. T.D. 960 ft.; W.O.S.R
Morefield & Prince No. 1 Benefield, NE cor. Robt. Potter Sur., 4 mi. W of Ot City. La. P.B. to 945 ft.; W.O.C.S.
Morefield & Thompson No. 1 B. Potter, Robt. Potter Sur., Caddo field. Drk.

Panola County

Danciger O. & R. No. 1 Tatum, A. Bissell Sur. M.I.M.
R. H. Dearing & Sons No. 1 Wooten Est., W. Mann Sur. M.I.M.
Matex Oil Co. No. 1 Thomas M. Alston 3 mi. E of Elysian field. Drlg. 5,200 ft.

Shelby County

Wm. Redditt No. 1 Pickering Lbr. Co., S' cor. Stephens English Sur. S.D. 2,165 ft.; prep. D.D.
H. A. Stebbinger No. 1 Pickering Lbr. Co on 160-ac. tr. in A. Hanson Sur. Cg. 5,200 ft.

NORTH TEXAS WILDCATS

Archer County

Cargo Oil Co. No. 1 Slopansky, sec. 64, Harris Sur. Loc.
Tom Looney No. 1 J. S. Bridwell, W. B. Aldridge Sur. No. A-2. Drk.
Pet. Prod. Co. No. 1 Turbeville D, R. Carson Sur. A-88. Drlg. 1,175 ft.
J. A. Self No. 1 Symank, sec. 11, L. & M Pasture. 6⅝-in. 1,420 ft.; S.S.O. 1,421-25 ft.; S.D.O.
J. G. Steele No. 1 Andrews, R. Rainey Sur. A-354. Drlg. 370 ft.
Sussex Oil Co. No. 1 T. B. Wilson, sec. 9, H.&T.C. Sur. Spdg.
Wilson & Ligon No. 1 Pearston, sec. 120, Harris Sur. Drlg. 706 ft.

Clay County

L. T. Burns No. 1 Sanzenbacker, L. N. Sparks Sur. A-401. Loc.
Green Mt. Oil Co. No. 1 Staggs, sec. 34, A.C.S.L. Sur. Spudded and S.D.
R. N. Hamilton No. 1 Fred Wines, sec. 4 H. Dixon Sur. A-106. S.D.O. 260 ft.

Collin County

Sorrell et al No. 1 D. R. Clark, J. Rowland Sur. Spudded and S.D.

Cooke County

Denver P. & R. Co. No. 1 Solomon, W. G. Hunt Sur. A-493. Loc.
Peterson et al No. 1 J. M. Floyd. Chas DeMorse Sur. A-305. Drlg. 727 ft.
Ruble & Lowery No. 1 Dozier, Lot 12, F S.L. Sur. Drlg. 3,278 ft.
Sparks & Russell No. 1 C. F. Bundy, P. P. Cady Sur. A-1,239. R.U.S.

Denton County

Bolivar Drlg. Co. No. 1 Bentley, J. Yoakum Sur. A-1,443. Drlg. 1,100 ft.
Bolivar Drlg. Co. No. 1 J. P. Knox, R. Howard Sur. A-542. Gas sd. 1,950-55 ft. C.O. and tstg.
H. Culver No. 1 Waide, J. Chisum Sur. A-278. Loc.
J. C. Foster No. 1 Jeffcoat, J. West Sur Drlg. 2,591 ft.
Mullen & Weil, Inc., No. 1 D. G. Taylor, Linthieum Sur. A-1,600. Spudded.
Oil Finance No. 1 J. S. Gambill. Drlg. 1,-795 ft.
Ruwaldt & Martin No. 1 Joe S. Gambill, J. B. January Sur. A-658. Drlg. 672 ft.

Grayson County

F. Galbreath et al No. 1 Singletary, Chas Quillian Sur. A-989. P.B. 3,862-75 ft.; spudded.
North Texas Oil Co. No. 1 A. M. Smith, K. M. Williamson Sur. A-1,300. Drlg. 260 ft.
O. T. Clark No. 1 Mulder, J. Barefoot Sur. S.D.O. 600 ft.
Olson et al No. 1 D. R. Uitger, P. P. Cady Sur. A-301. Drlg. 4,650 ft.
Pete Shanor No. 1 Blair, H.L. 3,548-55 ft.; show heavy oil.

Hardeman County

Locke & Durham No. 1 Schoppa, sec. 57 H.&T.C. Sur., Blk. 16. S.D. 627 ft.

Jack County

L. T. Burns No. 1 M. N. Garrett, B.B.B.& C. Sur. A-100. Loc.
Carpenter Oil Corp. No. 1 Johnson, R. Parker Sur. A-461. R.U.S.
Danciger O. & R. Co. No. 1 Kinder, B.S.&F. Sur. A-83. Drlg. 2,355 ft.
S. B. Edwards No. 1 Williams, J. M. Ross Sur. A-992. Drlg. 2,000 ft.
L. Hedrick No. 1 Brown, S. M. Holderness Sur. A-1,532. Drlg. 3,020 ft.
H. M. Leidecker No. 1 J. W. Padgett, E. Allbriton Sur. A-1,890. Loc.
Sam Shabay No. 1 J. S. Callis, S.P.R.R. Sur. A-575. R.U.C.T.
Tillman et al No. 1 Jones, J. Helmstutter Sur. No. A-1,269. Drk.

Montague County

Denver P. & R. Co. No. 1 Copeland, Blk. 162, Kembro Sur. Drlg. 2,870 ft.
Edgar T. Hart No. 1 W. L. Davis, sec. 12, Jack Co. Sch. Ld. S.D. 1,100 ft.
Montague Oil Co., Inc., No. 1 W. J. Bell, sec. 2,882, T.E.&L. Sur. Drlg. 3,655 ft.
Selby O. & G. Co. No. 1 J. M. Batts, M. B. Tatum Sur. A-740. Loc.
Vortex Investments, Ltd., No. 1 S. E. Bell, sec. 11, M.E.P.&P. Sur. S.D.O. 1,610 ft.

Throckmorton County

R. J. Williams No. 1 W. B. Parrott, T.E. &L. Sur., sec. 961. S.D.O. 2,520 ft.

Wichita County

Christie et al No. 1 Vanmeter, Blk. 35, K.W.V.F.L. Sur. Drlg. 1,810 ft.
Leo Oil Co. No. 1 Fonville, sec. 323, Waggoner Co. Sur. R.U.R.
Petroleum Prod. Co. No. 73 First National Co., Blk. 29, K.W.V.F.L. Sur. Drlg. 3,-201 ft.
United Prod. Co. No. 1 J. T. Harrell, Blk. 9, Denton Co. Sch. Ld. Sur. Drlg. 1,-270 ft.

Wilbarger County

Gibson & Jennings No. 1 Waggoner, sec. 109, H.&T.C. Sur., Blk. 14. Drlg. 1,020 ft.
F. A. Lain No. 1 J. Coffee, sec. 44, H.&T.C. Sur. O.W.D.D.; drk.
E. C. Lawson No. 1 Waggoner, sec. 103, H.&T.C. Sur. S.S.O. 1,483-1,504 ft.; tstg.
Peery Oil Co. No. 1 King, sec. 44, H.&T.C. Sur., Blk. 13. S.D.O. 2,160 ft.
L. Webb No. 1 Waggoner, sec. 49, H.&T.C. Sur., Blk. 2. L.S.O. 2,406-28 ft.; tstg.

Wise County

Latex Oil Co. No. 1 Smith, J. Couch Sur. Spudded.
Texas-Canadian Dev. Co. No. 1 T. N. Maxwell, Isham Epps Sur. A-267. S.D. 4,-025 ft.

Young County

Ambrose & Meyers No. 1 Brogden, T. C. Wadley Sur. A-2,309. Loc.
S. Caprito No. 1 Laquay, A. Irvin Sur. A-1,779. Drlg. 4,200 ft.
Collins & Fitzwater No. 1 J. G. Castleman, sec. 72, T.E.&L. Sur. Spudded.
J. E. Kadane No. 1 B. F. Manley, T.E.&L. Sur. 2,128. Drk.
C. A. Lupton et al No. 1 Hall, B. R. Aiken Sur. A-2,241. Drk.
Pitzer & West No. 1 F. Wray, T.E.&L. Sur. 3,411. Drk.
A. F. Strong No. 1 M. K. Graham, T.E.&L. Sur. 3,410. Drlg. 850 ft.
R. H. Vise No. 1 Dollins, T.E.&L. Sur. 615. Drlg. 3,800 ft.
C. V. Welch No. 1 Street, M. E. Criswell Sur. A-1,772. S.D.O. 1,410 ft.
Vortex Pet. Co. No. 1 W. E. Steele, I.R.R. Sur. A-156. Drlg. 725 ft.

WEST TEXAS WILDCATS

Andrews County

Botkins & Barron No. 1 Kemp. Loc.
M. S. Forgeron et al No. 1 Lockhart & Brown, C NE¼ sec. 20, Blk. A-41, P.S.L. Sur. Loc.
G. F. Getty, Inc., No. 1 R. H. Lindley, sec. 8, Blk. A-46. T.D. 4,642 ft.; pumped 156 bbls. oil.
Geo. F. Getty No. 1 Moxley. T.D. 4,802 ft. C.O.
Mannigan No. 1 Lotus Oil Co., sec. 18, Blk. A-48, P.S.L. Sur. Drlg. 3,127 ft.
R. H. Henderson No. 1 J. E. Parker, sec. 35, P.S.L. Sur. A-43. T.D. 4,555 ft.; pumping 12½ bbls. day.
Humble O. & R. Co. No. 1-B Means, sec. 11, Blk. A-45. Drlg. 3,541 ft.
Shell Pet. Corp. No. 1-E F. King, sec. 10, Blk. A-42, P.S.L. Sur. T.D. 4,471 ft.; to deepen.
Standard of Texas No. 1 Gray Estate, 1,980 ft. from N and 660 ft. from E. sec. 21, Blk. A-42, P.S.L. Sur. Cellar.

Bailey County

E. L. Wilson et al No. 1 Blank, 660 ft. from N and E, Labour 4, Abner Taylor League 700. Loc.

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur.; T.D. 3,915 ft.; fsg.

Cochran County

Bond & Harrison No. 1 Dean, 1,083 ft. from N and 330 ft. from E, Labour 1, League 85, Greer Co. School Lands. Drk.

Coke County

Plymouth Oil Co. No. 1 Mrs. Mary Hanna, 330 ft. from SW of SE¼ sec. 252, Blk. LA, H.&T.C. Sur., 1½ mi. SW of Blackwell. Loc.

Crane County

Clark et al No. 1 Jordan, sec. 12, Blk B-22, P.S.L. Sur. T.D. 3,750 ft.; testing on pump.
Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Drlg. 4,380 ft.
Sinclair Prairie Oil Co. No. 1 University, sec. 13, Blk. 35. Drlg. 1,820 ft.

Crockett County

Superior Oil Co. of Calif. No. 1 J. S. Todd, C SE¼ sec. 55, Blk. UV, G.C.&S.F. Sur. Drk.

Ector County

Bond & Harrison No. 1 Rumsey, sec. 35 Blk. 45, Twp. 1n, T.&P. Sur. Drlg. 4,127 ft.
Sinclair Prairie Oil Co. No. 2-A Johnson sec. 48, Blk. 43, Twp. 1s, T.&P. Sur. T.D. 4,345 ft.; P.B. 4,173 ft.; testing on pump.

Edwards County

Dan Auld et al No. 1 Rigsby, sec. 16, Blk. OK, G.C.&S.F. Sur., 15 mi. NE of Rock Springs. Spudded.

Fisher County

L. A. Daniels et al No. 1 J. J. Nickless. T.D. 2,848 ft.; U.R. csg.
Forrest Dev. Co. No. 1 J. A. Scott, sec. 105, Blk. 2, H.&T.C. Sur. Drlg. 1,042 ft.
Martin & Brubaker No. 1 Brown, W. E. Richardson Sur., sec. 4, Blk. R, S.D. 2,725 ft.
Southern Oil Co. No. 1 Robinson, sec. 173, Blk. 2, H.&T.C. Sur., 2½ mi. NE of Raton. Drlg. 2,715 ft.

Gaines County

Landreth Prod. Co. No. 1 C. Cobb, sec. 20, Blk. A-21. Drlg. 3,631 ft.

Garza County

S. Caprito No. 1 Post Estate, sec. 230, Blk. 5, K. Aycock Sur. Drlg. 1,722 ft.

Glasscock County

Fleetborn Oil Co. No. 1 Black Arrow, sec. 3, Blk. 34, Twp. 3s, T.&P. Sur. Drlg. 2,460 ft.

Hockley County

Texas Co. No. 1 B. Slaughter, Labour 33, League 38, Zavala Co. Sch. Lds. Drlg. 4,651 ft.

Howard County

Moore Bros. No. 1 T.&P. Land Trust, 330 ft. from N and E, sec. 33, Blk. 30, Twp. 1s, T.&P. Sur. Loc.
Shasta Oil Co. No. 1 Texas Land, 330 ft. from S and E of NE¼, sec. 5, Blk. 15, T.&P. Sur. Loc.
R. A. Westbrook et al No. 1 G. T. West, sec. 48, Blk. 33, Twp. 1n, T.&P. Sur. S.D. 1,460 ft.; air decreased to 75,000,000 ft. daily.

Hudspeth County

Haymon Krupp Oil & Ld Co. No. 1 Thaxton, SE¼ sec. 34, Blk. 74, Twp. 6. Drlg. 2,862 ft.

Jones County

Fain-McGaha, Inc., et al No. 1 Lotspeick, sec. 40, Blk. 15, T.&P. Sur. Drlg. 2,318 ft.
Fain & McGaha No. 1 Swenson, sec. 2, A. D. Norcop Sur. Drlg. 1,567 ft.
Hufstuttler et al No. 1 J. L. Faver. 170 ft. from S and E, Subd. 4, A. Thompson Sur., ½ mi. E of Lanius. Drlg. 2,060 ft.
Martin & Son No. 1 Hayden, Subd. 5, Lot 2, Martinez Sur. Drlg. 2,270 ft.
McMann et al No. 1 Dyer sec. 12, Blk. 2, S.P.R.R. Sur. Machine.
J. L. Reeves No. 1 Kelly, C. Martinez Sur., 1½ mi. N of Hawley. T.D. 2,251 ft; P.B. 2,225 ft.
T. K. Simmons No. 1 E. A. Hicks, sec. 5, O. A. Lands Sur. Fsg. 2,100 ft.
Ungren & Frazier No. 1 J. J. Steele, sec. 11, Blk. 15, T.&P. Sur. T.D. 2,487 ft.; swabbing.

Loving County

Mason Oil Co. No. 3 Kyle, sec. 20, Blk. 55, Twp. 1, T.&P. Sur. Drlg. 700 ft.
Stanolind O. & G. Co. No. 1 M. Kyle, 2,310 ft. from S and E, sec. 20, Blk. 55, Twp. 1, T.&P. Sur. M.I.M.

Pecos County

Adams & Black No. 1 Masterson, sec. 71, Blk. 10, H.&G.N. Sur. M.I.M.
Bahan & Rhodes No. 1-B Bonebrake, sec. 116, Blk. 8, H.&G.N. Sur. T.D. 2,290 ft.; swedging csg.
Hightower Oil Corp. No. 1 Holmes, sec. 6, Blk. C-3, E.L.R.R. Sur. Drlg. 2,612 ft.
Humble O. & R. Co. No. 1 E. M. Gray, sec. 94, Blk. 11, G.H.&S.A. Sur.; 5,000-ft. test. S.D. 1,346 ft.
Humble O. & R. Co. No. 1 J. Tippett, sec. 538, Arnold & Bennett Sur. Drlg. 1,200 ft.
A. Kirk et al No. 1 Mrs. B. Young, sec. 49, Blk. 10, H.&G.N. Sur. Loc.
E. R. Minsnail, No. 1 Banker, sec. 25, Blk. 146, T.&St. L. Sur.
Pinerock Oil Co. No. 1 White & Baker, SE cor. sec. 5, Blk. 207, T.C. Sur. Spd. and S.D.
S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. Drlg. 4,715 ft.
Trans-Pecos Oil Co. No. 1 Gallagher. T.D. 1,272 ft. Running csg.
Union Oil & Mining Co. No. 1-A Magnolia, sec. 5, Blk. 9, H.&G.N. Sur. S.D. 1,821 ft.
Young No. 1 Bailey, sec. 23, Blk. 178, T.C. Ry. Sur. Drlg. 2,015 ft.
Young No. 1 Bailey, sec. 23, Blk. 178, T.C. R.R. Sur. Drlg. 2,027 ft.
Young No. 1 Perry. R.U.M.

Presidio County

L. C. Brite No. 4 fee, C NW¼ sec. 113, Blk. 12, G.H.&S.A. Sur. Drlg. 370 ft.
A. H. Main No. 1 Greenlee, sec. 40, Blk. 347, 13 mi. NE of Marfa. Machine.

Reagan County

Bahan & Rhodes No. 1 Kloh, sec. 37, Blk. 37, Twp. 5s, T. & P. Sur., NW cor. of county. T.D. 3,125 ft.; ran csg.
O. B. Greathouse No. 1 W. E. Friend, 330 ft. from S and W, sec. 3, W. Allen Sur. Loc.

Reeves County

Grisham & Hunter No. 1 Montgomery, sec. 1, W.R. King Sur. Drlg. 2,522 ft.
J. C. Hill et al No. 1 Ely, 1,320 ft. from N and W, sec. 38, Blk. 71, P.S.L. Sur. Cellar.

Schleicher County

J. M. Cooper No. 2 B. Page, sec. 40, Blk. L, G.H.&S.A. Sur. M.I.T.
Mangus Oil Co. No. 1 Judkins & Spencer, C SW¼ sec. 4, W. W. Russell, grantee. Elev. 2,209 ft.; T.D. 6,527 ft.; P.B. 5,912 ft.; shot 145 qts. from 5,814-5,920 ft.; C.O.

Scurry County

Bristow & Cantrell No. 1 Tomlinson, sec. 122, Blk. 97, H.&T.C. Sur. Drlg. 811 ft.
E. L. Goos No. 1 Henderson, 1,980 ft. from S and W, sec. 148, Blk. 97, H.&T.C. Sur. Loc.

Upton County

Amerada Pet. Corp. No. 5 Lane, 330 ft. from S and 990 ft. from W, sec. 32, Blk. 1, M.K.&T. Sur. Loc.

Ward County

Magnolia Pet. Co. No. 1-55 Sealy, sec. 55, Blk. F, G.M.M.B.&A. Sur. Drlg. 1,773 ft.
L. F. White et al No. 1 Rector-Monroe, E cor. sec. 3, Blk. 1, W.&N.W. Sur. Drlg. 912 ft.
Wood et al No. 1 Boogher, sec. 8, Blk. 32, H.&T.C. Sur. Drlg. 2,455 ft.

Winkler County

Richardson No. 1-B Walton, sec. 20, Blk. 77, P.S.L. Sur. Drlg. 910 ft.
J. R. Sharp No. 1 Walton, sec. 19, Blk. 77, P.S.L. Sur. T.D. 3,275 ft.; testing.
York & Harper et al No. 1 Gunter & Munson, sec. 7, Blk. C, G.M.M.B.&A. Sur. Drlg. 3,222 ft.

Yoakum County

Bahan et al No. 1 Shook Est., sec. 420, Blk. D, John H. Gibson Sur. Loc.
Magnolia Pet. Co. No. 1 Mrs. M. E. Taylor, 330 ft. from N and E, sec. 201, Blk. D, John H. Gibson Sur. Loc.

RANGER (CENTRAL TEXAS) DISTRICT

Callahan County

Canyon O. & G. Co. No. 1 J. O. Kidd, R. A. Pennell Sur. No. 755, 4 mi. NW Cross Plains. S.D. 553 ft.
A. R. Forster No. 1 C. B. Snyder, NW cor. NE¼ county, sec. 139, B.B.B.&C. Sur. Spud. and S.D.

Coleman County

Midfield Oil Co. No. 1 T. H. Ward, sec. 274, W. Echels Sur. S.D.O. 1,500 ft.

Eastland County

J. T. Anderson No. 1 Crist, 8 mi. N of Rising Star, sec. 36, Lavaca Co. Sch. Lds. Drlg. 165 ft.
J. A. Bearman et al No. 1 Mrs. R. L. Poe, S edge Cisco, 450 ft. from S and W of sec. 79, H.&T.C. Sur., Blk. 4. Bldg. drk.
F. J. Estes No. 1 Gentry, A. Popejoy Sur. Fsg. 2,675 ft.
Hoffman & Page No. 1 Dodd, 5 mi. S of Ranger, Subd. 11, William VanNorman Sur. Spdg.
States Oil Corp. No. 1 H. S. Schmick, 1 mi. NE Eastland, SE¼ sec. 1, H.&T.C. Sur., Blk. 4. Drlg. 750 ft.

Hamilton County

Seaboard Oil Co. No. 1 fee, A. C. Grimes Sur., 10 mi. N of Huntington. Top Ellenberger 4,144 ft.; T.D. 4,348 ft.; S.D.O.; P.B. to treat lime 4,146-69 ft.

Jones County

Fain & McGaha Oil Corp. No. 1 Lewis, 5½ mi. NE Hawley, 660 ft. from N and 1,110 ft. from W, S½ sec. 37, T.&P. Sur., Blk. 15. Fsg. tools 1,565 ft.
Fain & McGaha Oil Corp. No. 1 Swenson, ½ mi. W Lueders, 220 ft. from N and W of sec. 2, A. D. Norcop Sur. Drlg. 1,567 ft.
S. C. Herring No. 1 Eleanor Haynes, sec. 191, S. Andrews Sur., NE edge Sayles pool. Drlg. 1,195 ft.
Hugh King, Jr. et al No. 1 Harris, SE edge Nugent, 1,760 ft. from S line and 2,400 ft. from W line, H. Stover Sur. No. 7. Fsg. 1,968 ft.
Lewis Prod. Co. et al No. 2 Sayles, 240 ft. sec. 6, T.&P. Sur., Blk. 20, 880 ft. W No. 1, 1 mi. S Sayles pool. R.U.
Lueders Dev. Co. No. 1 Underwood, 2 mi. S Lueders, 1,650 ft. S and 150 ft. W of SE cor. sec. 16 N. Scott, but in S. L. Underwood Sur. No. 1. Drlg. 1,140 ft.
Peckham et al No. 1 Denton Co. Natl. Bank, NE cor. county, 220 ft. from N and E of SE¼ sec. 17, H.&T.C. Sur., Blk. 3. Loc.

Palo Pinto County

D. H. & C. Drlg. Corp. No. 1 Davenport, 6 mi. SE Palo Pinto, L. F. Margaret Sur. A-309. T.D. 2,000 ft.
Paul Garrett No. 1 Mabry heirs, NE cor. county, sec. 2,672, T.E.&L. Sur. S.D. 649 ft.
W. K. Gordon et al No. 2 Canty, 8 mi. W Palo Pinto, sec. 42, T.&P. Sur., Blk. 2. Drlg. 1,250 ft.
Earnest Lloyd et al No. 1 Bailey, 3 mi. NE Graford, 225 ft. from E line and 1,500 ft. from S line of sec. 2,003, T.E.& L. Sur. Loc.

Shackelford County

Dean Bros. et al No. 1 Newell C, sec. 87, E.T.R.R. Sur., 1 mi. SW Cook pool. S.D. 300 ft.
Humble O. & R. Co. No. 1 Bowman, sec. 80, T.&P. Sur., Blk. 12, 7 mi. E SW cor. county. Drlg. 410 ft.
Iron Mountain Oil Co. No. 1 Ivy, NW cor. county, sec. 159, B.B.&C. Sur. Drlg. 1,-635 ft.
Jones, Stastney, Groover & Rose No. 1 Davis, 4 mi. S Morris-Buie pool, sec. 10, T.&P. Sur., Blk. 13. Loc.
Frank Oyster et al No. 1 J. C. Swenson, 7 mi. N Morris-Buie pool, sec. 14, A.B. &M. Sur. T.D. 1,770 ft.; U.R. 6⅝-in.
Roeser & Pendleton No. 1 Davis, sec. 1, T.&P. Sur., Blk. 13, 220 ft. from E and

(Continued on Page 122)

PERSONAL

THOMAS H. SHERMAN, prominently identified with California's petroleum industry for the past six years as assistant general manager and chief of the engineering and statistical department of Oil Producers Agency of California, has resigned his position with that organization to become associated with E. B. MILBURN and H. R. HAMILTON, well known Los Angeles oil men. Prior to his connection with Oil Producers Agency in 1931, when it was founded, Mr. Sherman was employed as a petroleum engineer, geologist and in the land and lease departments of California oil companies for a period of 10 years. In the Milburn and Hamilton organization he will resume his profession of engineer and geologist, remaining connected, however, with Oil Producers Agency in the capacity of consulting statistician.

C. H. HARDEN of the producing department of the Pure Oil Company has been transferred from the Van field, in Texas, and made general superintendent of operations in Illinois, with headquarters at Clay City. WILLIAM PARSONS, superintendent at Mexia, Tex., succeeds Mr. Harden as assistant superintendent at Van. W. F. WILSON, superintendent in the Carroll, Tex., district, succeeds Mr. Parsons, and W. H. SEYFFERT succeeds Mr. Wilson.

EMMETT WILSON, superintendent of production in the East Texas field for the Magnolia Petroleum Company, has been transferred to Oklahoma City, Okla., to fill the position left vacant by the promotion and transfer of E. D. SMITH to Dallas, Tex., headquarters as an assistant manager of the producing department of the company. HARVEY LEE has been moved from Drumright, Okla., to Greggton, Tex., to be superintendent in the East Texas field, and ROY WILSON has been promoted from lease foreman to superintendent, and transferred from the Earlsboro, Okla., district, to Drumright.

PAUL A. BARENKAMP, scout for the Sun Oil Company at Tyler, Tex., has been called to St. Louis, Mo., on account of the serious illness of his mother.

RICHARD T. LYONS, who recently resigned as vice president of Skelly Oil Company to become manager of the land and geological departments of Tide Water Associated Oil Company at Houston, Tex., was a business visitor in Tulsa recently.

R. H. (Bob) LYNN, formerly vice president of the Phillips Petroleum Company, and DEAN McGEE, formerly chief geologist for the same company, resigned those positions recently to join the A.&K. Petroleum Company, with headquarters in Oklahoma City, Okla.

GEORGE S. HEYER, of Houston, Tex., was reelected president of the General Crude Oil Company at the annual stockholders and directors meeting of the company held in Houston the past week. Officers reelected who will serve with Mr. Heyer during the ensuing year are THOMAS W. PEW, vice president, and J. F. TREVITT, secretary and treasurer. Directors reelected include MESSRS. HEYER and PEW, WALLACE THOMPSON, PALMER BRADLEY, and W. L. GOLDSON of Houston; R. W. PACK and JOINER CARTWRIGHT of Beaumont; J. EDGAR PEW of Philadelphia and JOHN MILLS of Galveston, Tex.

H. E. BRANDLI of Cities Service Export Oil Company, will be absent from his New York office for two weeks while on vacation.

D. C. SHAFFER, formerly vice president of the Memphis Natural Gas Company, and one of the pioneer operators in Mexico, is now associated with Oilfield Equipment Company of New York.

J. C. WELLIVER of Philadelphia, Pa., director of public relations for the Sun Oil Company, and MRS. WELLIVER are enroute to California aboard the Grace liner Santa Rosa which sailed from New York March 13.

PHILLIP JOHNSON, vice president of Olympic Refining Company, recently returned to Los Angeles, Calif., from San Francisco, following a business trip during which the company's future development program in the Wilmington field of Los Angeles Basin was discussed and approved.

DR. E. C. BAIN, president of the American Society for Metals and assistant to the vice president in charge of metallurgy and research for the United States Steel Corp., was the principal speaker at the Texas chapter of the American Society for Metals at Houston the past week. His subject was "Apparent Anomalies in the Hardening of Steel."

THOMAS E. WARD, president of Oilfield Equipment Company, Inc., will leave New York March 25 for a short business trip to Cuba. Enroute to or from Cuba he will visit in Houston, Tex., on arraignments for the oil equipment export division of the Oil-World Exposition. Mr. Ward has been made chairman of the oil equipment export committe for the exposition.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Two plans for opening all of Osage County, Oklahoma, for oil and gas purposes include one to lease the unleased portion to a big company in blanket form, the other to lease it to individuals in quarter-section plots.

The late Joseph W. Craig of Sewickley, Pa., oil and gas man, left an estate valued at from $4,000,000 to $6,000,000. It was bequeathed to his brothers and sisters.

Joseph B. Ritchey, 84, pioneer Washington County, Pennsylvania, oil producer, dies in Washington.

20 YEARS AGO

Michael Murphy, 75, millionaire oil producer, dies in Philadelphia, Pa. In 1894 Mr. Murphy "cornered" the Eastern crude oil market and forced the price of crude from $1.12 to $2.60 per barrel before he sold his oil to the Seep Purchasing Agency. That "corner" sounded the death knell of the oil exchanges. At the time of his death Mr. Murphy was president of the Pure Oil Company.

Roxana Petroleum Corporation is reorganized with a capital stock of $60,000,000. W. A. J. M. van Waterschoot von der Gracht is president.

A drought of eight months duration in Oklahoma was broken on March 12 by a heavy rain.

10 YEARS AGO

A. S. Hopkins is elected president of the Standard Oil Company of Kansas, succeeding J. C. McDonald, who retired because of ill health.

A cut in crude prices lowers the value of production east of California about $345,000 per day.

Ralph B. Pringle, of Tulsa, has joined the Independent Oil & Gas Company and will direct its field operations.

KENNETH CRAVER, secretary and treasurer of Thornhill-Craver Company, is on an extended business trip through Canada and Venezuela.

JOHN ALVIN YOUNG, of Panpantla Royalty Corporation, has returned from a two months' trip to Mexico in connection with his company's interest in the Poza Rica field.

W. H. TUTTLE, engineer for Max B. Miller Company of New York, left last week on a business trip through Texas, Oklahoma and other Mid-Continent producing and refining districts.

HARVEY G. FIELDS, as president, and O. A. PEPPER, as vice president, have organized the North Louisiana Mineral Company at Farmerville, La., and they will deal in leases and royalties across northern Louisiana.

PERRY VANDERVORT, superintendent of the Gilmore Oil Company's refinery in the Cat Canyon district of the Santa Maria field in California, has completed repairs and reconditioning work on the plant preparatory to an early resumption of activities.

ROBERT S. KING has tendered his resignation, effective April 1, as president and general manager of Pennzoil Company, a position he has held for two years. Mr. King plans to devote his time to oil interests acquired recently in Wyoming and in the Mid-Continent area.

WILLIAM J. REYNOLDS, British petroleum technician, sailed from New York, March 10, aboard the Queen Mary after visiting several Texas oil fields. He is a director of Trinidad Oilfields, Ltd., and recently visited properties in Trinidad in which his company is interested.

PARAGRAPHS

C. L. MOODY, chief geologist for Ohio Oil Company in Shreveport, La., is attending the A.A.P.G. convention in California next week.

LON B. TURK, consulting geologist of Oklahoma City, addressed the Tulsa Geological Society Monday evening leading a discussion of geological and production problems met in the Oklahoma City field.

TOM F. HILL, who has been scouting in North Texas for the Sun Oil Company, with headquarters at Greenville, has been transferred to Corpus Christi, Tex. NEWT BURNETT, formerly in the Dallas office of the company, has been transferred to Greenville to fill the vacancy made by Mr. Hill's transfer.

L. H. TRUE, superintendent in the Southwest district for the Magnolia Pipe Line Company, has been promoted to general superintendent in the Texas-Louisiana-Arkansas district and transferred to the Dallas, Tex., headquarters. Mr. True was located in the East Texas field prior to being transferred to Luling, in the Southwest Texas district. J. E. McGEATH, chief gauger in East Texas, Louisiana and Arkansas, has been promoted to superintendent of the Southwest district and moved to Alice, Tex., and GUY WHITE, gauger in the Rodessa field, Louisiana, has been elevated to chief gauger to succeed Mr. McGeath.

JOHN A. BROWN, of New York, president of the Socony-Vacuum Oil Company, Inc., has been visiting E. R. BROWN in Dallas, Tex., during the week, coming from California. Mr. Brown is a vice president of Socony-Vacuum and chairman of the board of the Magnolia Petroleum Company.

WILLIAM T. DEACON, vice president and general manager of the St. Louis Surfacer & Paint Company, St. Louis, Mo., delivered the principal address before the technical group of the Ark-La-Tex division of W.P.R.A., held in Shreveport, La., on March 12. His topic was "Paints for the Oil Industry; Their History, Development and Use."

JAY TAYLOR, president, Amarillo Oil Company, Amarillo, Tex., has been elected member of the board of the Eleventh Federal Reserve District, Dallas, Tex. Mr. Taylor, 35 years of age, is said to be the youngest member of any federal reserve bank board of directors. He is interested in cattle and owns ranches in Texas, Oklahoma and New Mexico. He is also general manager of Halliburton Oil Well Cementing Company, Duncan, Okla.

PETER H. CURRY, of Pittsburgh, Pa., has been reelected president of the South Penn Oil Co. Mr. Curry was first elected to head the company in 1932, succeeding L. W. YOUNG, deceased. He has been connected with the South Penn for many years and was its vice president 14 years. Other officers reelected were F. J. HUFFMAN and C. B. TURNER, vice presidents; T. B. JUDGE, treasurer; JOHN L. HAYS, secretary; JOHN E. SELDON, assistant secretary, and CHARLES F. STEVENSON, general manager.

W. S. HERRON was elected president of Okalta Oils, Ltd., at the stockholders meeting at Calgary, Alberta. R. W. WARD is vice president; FRED WHITAKER, secretary and treasurer, and these officers and H. K. REED and ROBERT WILKINSON form the directorate.

RAY AUSTIN, of Shelby, Mont., district manager of Dowell, Inc., is visiting Calgary and other Alberta points this month.

ERIC CARTER, associated with the Anglo Ecuadorian Oilfields, Ltd., of Ancon, Ecuador, arrived in New York City March 9 aboard the Santa Barbara.

GEORGE MUIR, drilling contractor, of Calgary, Alberta, suffered a compound fracture of the leg while supervising drilling operations on the Highwood-Sinclair structure.

C. H. LIEB, president of the Carter Oil Company, has been presented with a 20-year service button. A. E. ERICKSON, district foreman for Oklahoma Pipe Line Company, also received a 20-year service button.

J. E. POWERS, Louisville, Ky., has been appointed executive secretary of the Kentucky Gasoline Retailers Association. He has been representative of the Pennzoil Company in the Louisville district for several years.

SIR JOHN CADMAN, chairman of the Anglo-Iranian Oil Company, accompanied by LADY CADMAN, is expected to arrive in the United States within a few weeks following a visit to Trinidad. The Cadmans will return to England in April.

R. R. ROBISON, of Shell Oil Company, has been appointed chairman of the California district subcommittee of the recently created committee on standardization of standard rigs and derricks of the American Petroleum Institute's Division of Production. H. A. GODDE, of Signal Oil Company, has been appointed California district chairman for 1937 of the topical committee on drilling practice of the Institute's Division of Production.

Sets the Pace Himself

They say R. W. McDowell, vice president and general sales manager of the Mid-Continent Petroleum Corporation, is a hard driver, but that the only person he drives is R. W. McDowell. Others he leads. Shiftlessness, laziness and apathy never thrive in the same room with him. He asks for cooperation, and gets it. Mr. McDowell is active in the A.P.I. general marketing committee, he helped to formulate the NRA oil marketing code and often is asked to help in the solution of marketing problems.

R. W. McDOWELL

Mr. McDowell was living in Blackwell, Okla., his schooldays scarcely over, when he enlisted for World War service in the Motor Transport Corps. Upon his discharge as a lieutenant he got a job in the sales department of the Producers and Refiners Corporation. He was assistant general manager when he resigned six years later to become vice president and general manager of the Hawkeye Oil Company, Waterloo, Iowa. When Hawkeye was merged with the Black Hawk Oil Company, an independent marketing organization, Mr. McDowell was made president of Black Hawk. In 1927 Mid-Continent purchased Black Hawk's physical properties and Mr. McDowell was made a division manager. The next year he was called to Tulsa to take charge of Mid-Continent's marketing activities. In 1930 he was made a vice president.

Mr. McDowell married Miss Mary E. Cannon of Tulsa, and they have two children. He is an enthusiastic follower of athletic sports.

BYRAN RUCKER, with Republic Supply Company at Seminole, Okla., has been transferred to Oklahoma City.

CAMPBELL M. HUNTER, O.B.E., arrived recently in Calgary, Alberta, from London, England, and will spend some weeks in the Alberta fields.

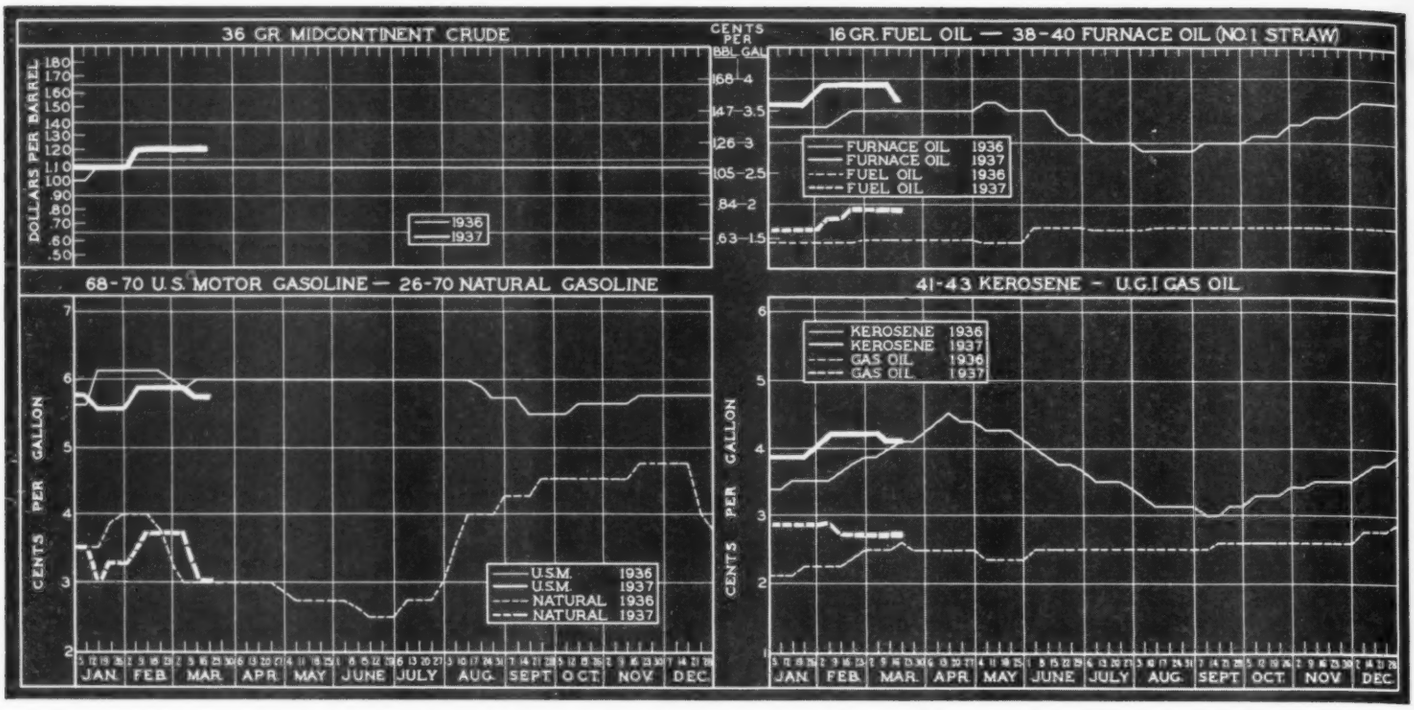
JAMES HALL, Tampico, Tamaulipas, a member of The Texas Company's organization in Mexico, is visiting the company's home office in New York.

GEORGE HOARD, of Los Angeles, Calif., superintendent and director of Bachman Petroleum Company, has resigned to go into the producing end of the business for himself.

E. S. BLEECKER, chief geologist for Mene Grande Oil Company, has returned from an extended trip to Venezuela where his company, formerly the Venezuela Gulf Oil Company, has extensive interests.

B. P. NEWTON, European representative of Gulf Oil Corporation, is due to return to the United States within a few weeks. He left London for a brief visit on the Continent before sailing for the United States.

R. B. KELLY, of Fort Worth, Tex., division manager, the Pure Oil Company, announced the promotion of FORD TURNER of Odessa as assistant manager of the land department in Texas, with office in Fort Worth. Turner has been district land man in West Texas for last nine years, the last four of which he spent at Odessa and the first five at San Angelo. Turner formerly was president of the National Oil Scouts Association of America and is a former president of the West Texas Oil Scouts. GENE O'CONNOR of Odessa has been promoted to Turner's place in the West Texas organization.



Representative Mid-Continent Quotations on Crude Oil and Refined Products. Basis Oklahoma (Group 3)

Major Buying and Overseas Inquiries Are Tonic for Gasoline in Group 3

By T. F. SMILEY

Gasoline was exhibiting signs of renewed life in the Group 3 area this week, and there was a more cheerful feeling with respect to the country's mounting stocks, which have been causing concern. Although prices remained about where they were last week, they were firmer, and it apparently needed only a few days of springlike weather to start them for higher levels.

Two subjects of comment in the trade were the brisk export inquiries and the expansive buying by major integrated companies at home. East Texas was reported to be well cleaned up, largely as a result of overseas and East Coast purchases. Substantial cargo business including one order for 400 cars, is said to have been booked in the past few weeks, with more in prospect. Scarcity of bottoms is presenting an obstacle. Increased tanker rates seemingly are having little effect on export gasoline trade. If boats were available, refiners say, there would be a spurt in shipments.

BUYING BY MAJORS SIGNIFICANT

The large buying by major companies is regarded as of particular significance in connection with the recent uneasiness over rising gasoline stocks. One company is reported to have placed an order for 100 cars and to be looking for more. Other companies have placed smaller orders. Although in some cases it may be this buying is prompted by a belief it is better business to purchase gasoline in the present low market than to take it out of storage, most of it is attributed to actual need of the material. One company which has been in the market is said to have made heavy withdrawals from its own storage and to be meeting difficulty in getting adequate crude supplies, its own production falling below its needs. One large integrated Mid-Continent company will be 250,000 bbls. short of its gasoline needs in June, according to report.

Refined Oil Market Barometer

The lubricant group took the lead, with bright stocks particularly vigorous. Notwithstanding continued piling up of stocks and wintry weather over much of the country, gasoline was holding well, and there was a widening opinion that the immense quantity of stored material would be absorbed in the coming summer season. Furnace oils were easing. Naturals were sluggish.

MID-CONTINENT. Heating oils off. Bright stocks strong. Gasoline slightly steadier.

EAST COAST. Lubricants at new 1937 highs. Gasoline holding. Fuel oils drifting downward.

GULF COAST. Market firm. Prices unchanged.

CALIFORNIA. General market lacks life.

PENNSYLVANIA. Neutral, bright and cylinder stocks up. Kerosene uneasy.

CHICAGO. Gasoline demand gradually expanding. Kerosene and tractor fuels firm.

A half-dozen large refiners in Kansas, Oklahoma, North Texas and West Texas, which have been sources of gasoline supply during the winter, have given notice they have no more to sell. This clearing up of stocks has reduced the total selling pressure, and any extended period of pleasant motoring weather doubtless would give the motor fuel market a smart push. Much of the northern territory is still overlaid with snow and a wintry wave which swept the Southwest in the past week chilled any impulse to take out the family car.

The naturals were fidgety, with some question as to whether the Oklahoma or the Texas market was the stronger. The North Texas price for 26-70, which was a quarter-cent lower than the Oklahoma last week, jumped up alongside its neighbor on the strength of generous buying, and both stood at 3 cents this week. Some Oklahoma material for which there is no refinery demand is going to the Gulf Coast for storage. A few inquiries from overseas were reported, but there was little promise of important business in them. The usual spring sluggishness in the naturals has arrived. Refiners now are making their summer fuel, with its lower need for volatility, and there is little reason for expecting a sturdy market till the time for making winter fuel comes again.

BRIGHT STOCKS HAVE ACTIVE MARKET

Bright stocks, which are experiencing a spanking market, sprang up another half-cent, as did most of the steam-refined stocks. At their present levels bright stocks are higher than they have been since July, 1934, when they took a sudden drop of about 3½ cents throughout the list. The descent continued till in December of that year the 190-200 D, 15-25, was selling at 16½ cents. The prices started up again in February, 1935. In the present market some Oklahoma refiners report their business in lubricants is breaking records. The buying is for the approaching summer season.

Kerosene manifested a somewhat stronger tone, with prices unchanged. Tractor fuels were in active demand. The lag in the furnace oils, which was noticeable last week, became more pronounced, and prices drooped. Jobber buying was restrained.

Wax, which had been somewhat easier, acquired new firmness. So far as could be ascertained, no refiners in the Group 3 area were quoting the 124-126 white crude scale lower than 2¾ cents. Heavy fuels continued steady and prices were holding, but demand for this material was not quite so urgent.

Activity in Lubricating Oil Stocks Is Unchecked by New Prices

By H. STANLEY NORMAN

NEW YORK, Mar. 16.—The increasing prices on lubricating stocks which sent bright, cylinder and neutral materials to new 1937 highs last week failed to dampen activity of buyers. Practically all available material is meeting ready purchasers both in the domestic and export markets. Neutral oils particularly showed their first real activity for 1937 last week, although business in this material has been satisfactory to refiners throughout the winter. Until last week, however, the buying had no more than absorbed offerings at steady prices. With an increase in inquiries and shipping instructions refiners generally advanced prices a half cent per gallon last week without producing any noticeable retarding effect on actual buying.

Much the same general conditions prevailed last week in bright stock and cylinder oils, although these products have been moving on an increasing market over the past six weeks or two months. Cylinder stocks were particularly active last week. Refiners generally raised their prices 1 to 1½ cents per gallon in the Pennsylvania district while the export quotations in barrels aboard ships were 1 to 2 cents per gallon higher than previously quoted.

Advances in bright stock were more modest and the general price is not much above the preceding week's top of the range. However, stocks are in strong hands and buyers are gradually increasing their interest pointing to the possibility of more advances in the not distant future.

In addition to the export buying and that by jobbers now preparing for summer business, inter-refinery purchases are growing as a factor in the market. Some of the inter-refinery buying is being carried through at the spot market quotations, indicating that purchasers are either anticipating further advances or that they are compelled to take this step in filling contract commitments. Another factor is resumption of deep water traffic with West Coast and far eastern consumers served by Pacific Coast trans-shipments. Most of the Pacific Coast Pennsylvania lubricating oil consumers delayed shipping instructions on all excepting bare minimum requirements until the marine strike was settled in California ports.

While lubricating markets were climbing to new 1937 peaks, remainder of the refined petroleum market in the North Atlantic Coast district was little changed from the preceding week.

Kerosene and fuel oils offered no new features following the quarter to half-cent reduction made the first week in March at most tankcar and barge terminals. Fuel oils enjoyed temporary increased demand during the first half of last week when temperatures stayed below freezing for three consecutive days, but the calls by jobbers and individual consumers consisted of limited volumes. More moderate temperatures returned at the end of the week and again reduced the delivery instructions on fuel oil to the seasonal minimum. Traders reported that demand was helped very little by the fractional cent reductions made early in the month by Standard Oil Co. of New Jersey and other leading marketers.

Demand for gas oil by export shippers was maintained at the level existing for the preceding two weeks. Refiners on the Gulf Coast were said to be resisting efforts by purchasers to shade 4 cents per gallon for 28-30 plus gas oil and were holding reasonably firm at 4 cents. Two sales of 64-66 375 endpoint gasoline were reported in the Gulf Coast export market last week. The price in both sales was 6 cents per gallon with loading specified in April on one small cargo and May on the full cargo. Buyers dealing with customers in France and Germany are particularly active in the gas oil market. Limiting trading, according to the version of some observers, is the fact that boats are difficult to secure. Charter rates appear to be increasing as the quest for fixtures rises, sustaining earlier observations of some traders that the tanker problem would be difficult to solve this summer. Reports that several tankers of foreign registry are being withheld from service with the deliberate intent of boosting charter rates appear to have little foundation. Rising tanker rates and a shortage of fixtures, however, has been of sufficient importance to draw frequent comment from foreign trade and allied publications.

Gasoline tankcar, tank-wagon and retail markets in the northeast held generally steady last week. However, there was a continuation of reports that the quoted tankcar market can be shaded in several directions for small quantities. The report of all-time record gasoline stocks is apparently creating a minimum of pessimism, due, no doubt, to the continued peak demand from motorists and other internal combustion engine operators for this season of the year. A weak spot developed to some extent during the week in the Baltimore and Philadelphia vicinity. Baltimore jobbers were reported meeting the inroads of lower price gasoline from Philadelphia by reducing their quotations to corresponding levels.

U. S. Motor gasoline in western Pennsylvania drifted into lower ground last week with prices ranging from 4.875 to 5 cents per gallon. Despite the willingness of refiners to shade prices for the sake of moving material, the stocks continue to increase. Much of the business currently reported on the U. S. Motor grade in western Pennsylvania is finding its way into hands of refiners equipped to reform or to blend it with cracking furnace charging stock. Higher octane gasoline was about on a par with other districts and production was reported moving in a satisfactory manner.

Trade in the wax market was featured by unsuccessful efforts of buyers to contract any appreciable amount of business below 2.65. At the figure quoted, suppliers insisted on delivery within reasonably near future feeling that prices will work higher. There were a few small sales reported at prices a shade under 2.65 cents per pound for the 124-126, white crude scale, but this business was confined to a few odd cars obtainable only by thoroughly canvassing the market. In some instances, suppliers refused to obligate themselves to supply wax at 2.65 cents over periods of more than 15 to 20 days. Bunker C grade and heavy industrial fuel oils were in satisfactory demand last week, but no changes appeared in quotations. With deep water and river shipping more active, however, the Bunker C suppliers feel that the market is at least strong at $1.20 per barrel in New York harbor.

Diesel oil at $1.65 per barrel is also holding firm and the demand is said by suppliers to be completely satisfactory for this season of the year. Prospects for increased demand for both kerosene and certain grades of diesel fuel when spring plowing starts are exerting a supporting influence. Talk of another crude advance was circulated freely in New York last week, although transmitters were reluctant to disclose their sources of information.

It is definitely known, however, that at least one of the factors in the crude oil market is considering

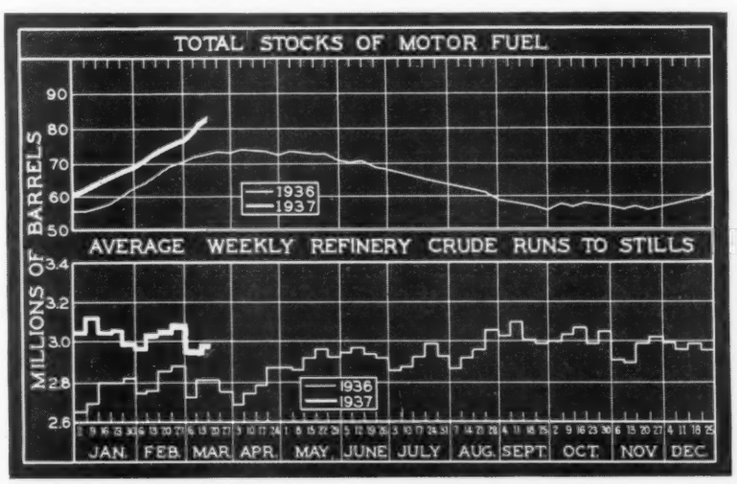
(Continued on Next Page)

A. P. I. Weekly Refinery Statistics

Week Ending March 13, 1937

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	496,000	17,429,000	7,421,000
Appalachian	88.4	102,000	2,837,000	523,000
Indiana, Illinois, Kentucky	92.1	432,000	13,384,000	4,629,000
Oklahoma, Kansas, Missouri	84.6	277,000	9,555,000	2,836,000
Inland Texas	54.3	118,000	2,296,000	1,268,000
Texas Gulf	95.5	672,000	10,512,000	6,202,000
Louisiana Gulf	96.3	122,000	1,886,000	1,471,000
North Louisiana and Arkansas	63.7	41,000	434,000	243,000
Rocky Mountains	69.7	40,000	1,843,000	714,000
California	90.9	464,000	14,893,000	70,529,000
Total reported	88.8	2,764,000	75,069,000	95,836,000
Estimated unreported	.....	221,000	6,167,000	3,128,000
*Estimated total	.....	2,985,000	81,236,000	98,964,000
*Estimated total previous week	.....	2,930,000	80,102,000	99,115,000
*March 14, 1936	.....	2,815,000	72,722,000	95,862,000

*Bureau of Mines basis, currently estimated.



RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of March 16, 1937

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Dir.	Inc. tax	tank-wag.
Chicago, Ill.	16.0	14.0	4.0	10.1
Decatur	16.0	14.5	4.0	10.1
Joliet	16.0	14.5	4.0	10.1
Peoria	16.0	14.5	4.0	10.1
Quincy	15.8	14.3	4.0	9.9
Davenport, Ia.	16.0	14.5	4.0	10.1
Des Moines	15.8	14.3	4.0	9.9
Mason City	16.2	14.7	4.0	10.3
Sioux City	16.0	14.5	4.0	10.1
Duluth, Minn.	16.8	15.3	4.0	10.9
Mankato	16.4	14.9	4.0	10.5
Twin Cities	16.4	14.9	4.0	10.5
La Crosse, Wis.	17.4	15.9	5.0	10.5
Green Bay	17.7	16.2	5.0	10.8
Milwaukee	17.3	15.8	5.0	10.4
Detroit, Mich.	15.1	13.6	4.0	9.8
Grand Rapids	16.5	15.0	4.0	10.9
Saginaw	16.2	14.8	4.0	10.7
Evansville, Ind.	17.5	16.0	5.0	†10.6
Indianapolis	17.7	16.2	5.0	†9.6
South Bend	17.9	16.4	5.0	†9.6
Fargo, N. Dak.	17.4	15.9	4.0	11.5
Minot	18.6	17.1	4.0	12.7
Huron, S. Dak.	17.8	16.3	5.0	10.9
Kans. City, Mo.*	15.4	13.9	4.0	8.9
St. Louis*	15.7	14.2	4.0	9.8
St. Joseph*	15.4	13.9	4.0	9.5
Wichita, Kans.	14.9	13.4	4.0	8.9

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax.

(Exclusive of state general sales taxes, except Indiana and South Dakota.)

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.6 cents. Stanolex furnace oil, 1-149 gallons, 7.8 cents; 150 gallons and over, 7.6 cents. Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents. Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wag. dir.	Tank car con'r.	Inc. tax	tank-wag.
Atl'tic City, N.J.	13.0	11.5	4.0	8.0
Newark	12.5	11.5	4.0	8.0
Annapolis, Md.	15.1	13.6	5.0	10.0
Baltimore	14.5	13.0	5.0	8.5
Cumberland	16.9	14.4	5.0	10.0
Wash'g'n, D.C.*	12.5	11.0	3.0	9.0
Danville, Va.	17.7	15.2	6.0	12.9
Norfolk	16.5	14.0	6.0	11.5
Petersburg	16.8	14.3	6.0	11.7
Richmond	16.8	14.3	6.0	11.7
Roanoke	18.0	15.5	6.0	12.9
Charles'n, W. Va.	16.3	13.8	5.0	12.6
Parkersburg	15.6	13.1	5.0	11.2
Wheeling	15.5	14.0	5.0	12.2
Charlotte, N. C.	18.9	16.4	7.0	12.6
Hickory	19.4	16.9	7.0	13.0
Mt. Airy	19.2	16.7	7.0	12.8
Raleigh	18.5	16.0	7.0	12.1
Salisbury	19.0	16.5	7.0	12.7
Charleston, S. C.	17.5	15.0	7.0	11.1
Columbia	18.5	16.0	7.0	12.1
Spartanburg	19.2	16.7	7.0	12.9

*Standard of N. J. has discontinued posting service-station prices at all above points except at Washington where a station price of 16 cents is in effect.

Price basis to commercial consumers, effective Nov. 2, 1936, in New Jersey, Maryland, District of Columbia and small portion of Virginia: On deliveries of 500 gallons or more by hose connection, consumer tankcar price plus .5 cent; less than 500 gallons, plus .75 cent, not taking deliveries by hose connection, plus 1 cent.

Effective Jan. 7, 1937, in greater portion of Virginia and in West Virginia differential above tankcar price on yearly purchases: up to 35,999 gallons, 2.5 cents over tankcar; 36,000 to 119,999 gallons, 2.0 cents; 120,000 to 239,999 gallons, 1.5 cents; 240,000 to 479,999 gallons, 1 cent; over 480,000 gallons .5 cent over tankcar price.

Effective Jan. 25, 1937, in North and South Carolina: Deliveries of 50 gallons or more by tank-wagon billed at price 2 cents over posted consumer tankcar price in effect at time and place of delivery. Deliveries less than 50 gallons billed at price .6 cent over posted tankcar price. Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero
	Tank wag.	Net dir.	Inc. tax	wag.
Atlanta, Ga.	22.0	19.0	7.0	*13.0
Augusta	18.5	15.5	7.0	*14.0
Macon	21.5	18.5	7.0	*14.5
Savannah	20.0	17.0	7.0	*13.0
Birm'ham, Ala.	21.0	18.0	8.0	12.0
Mobile	22.0	19.0	9.0	11.0
Montgomery	23.0	20.0	9.0	12.5
Jackson, Miss.	21.0	18.0	7.0	*13.0
Vicksburg	20.5	17.5	7.0	*13.0
Jacksonville, Fla.	20.5	17.5	8.0	11.0
Miami	20.5	17.5	8.0	12.5
Pensacola	22.0	19.0	9.0	12.0
Tampa	21.5	18.5	8.0	12.0
Lexington, Ky.	19.5	16.5	6.0	11.0
Covington	19.0	16.0	6.0	11.0
Louisville	19.5	16.5	6.0	10.5
Paducah	19.0	16.0	6.0	10.0

Price basis to tank-wagon consumers: Effective January 4, 1937, 3 cents per gallon below tank-wagon price. Kerosene prices in all states subject to 2 cents discount except in Kentucky where prices are net.

*Includes 1 cent state tax. Montgomery, Ala., has a county tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon. Pensacola, and Tampa, Fla., have a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Dealer	Serv. sta.	Inc. tax	tank-wag
Denver, Colo.	17.5	....	5.0	11.5
Grand Junction	20.0	....	5.0	15.0
Pueblo	15.5	....	5.0	10.5
Casper, Wyo.	18.0	....	5.0	11.5
Cheyenne	18.0	....	5.0	13.0
Butte, Mont.	19.5	....	6.0	15.5
Billings	21.5	....	6.0	15.5
Helena	21.5	....	6.0	15.5
Great Falls	21.5	....	6.0	15.5
Salt Lake, Utah	19.5	....	5.0	16.0
Twin Falls, Ida.	21.5	....	6.0	18.0
Boise	21.0	....	6.0	18.0
Albu'que, N. M.	17.5	....	6.5	12.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero
	Tank wag.	Serv. sta.	Inc. tax	wag
Ohio points	18.0	(†)	5.0	*13.5

*Includes state tax of 1 cent.

†Following the leasing of service stations to dealers at many points the company no longer posts a statewide service station price.

Pacific Coast Territory

STANDARD OIL CO OF CALIFORNIA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag
San Francisco	17.0	18.0	4.0	11.5
Los Angeles	16.5	17.5	4.0	9.0
Fresno, Calif.	18.0	19.0	4.0	12.0
Phoenix, Ariz.	20.5	21.5	6.0	‡16.0
Reno, Nev.	19.5	20.5	5.0	13.0
Portland, Ore.	19.5	20.5	6.0	13.5
Seattle, Wash.	19.5	20.5	6.0	13.5
Tacoma	19.5	20.5	6.0	13.5
Spokane	22.5	23.5	6.0	16.5

‡Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline			Kero.
	Tank wag. dir.	Tank car con'r.	Inc. tax	tank-wag.
Albany, N. Y.	13.5	12.0	4.0	7.75
*Met. N. Y.:				
Manh't'n, Br'nx	13.5	12.0	4.0	7.25
State Island	13.75	12.0	4.0	7.25
Q'ns & Brklyn	13.5	12.0	4.0	7.25
Buffalo	14.3	12.67	4.0	8.25
Rochester	14.3	12.74	4.0	8.25
Syracuse	14.3	12.7	4.0	8.75
Boston, Mass.	13.5	12.0	4.0	7.50
Portland, Me.	15.3	13.0	5.0	7.75
Manch'ter, N. H.	15.8	13.5	5.0	8.00
Burlington, Vt.	15.4	13.4	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer: Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point: Monthly purchases under 5,000 gallons, pay divided dealer tank-wagon price at delivery point.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wag. dir.	Tank car con'r.	Inc. tax	tank-wag.
Philadelphia, Pa.	14.0	12.5	5.0	10.5
Pittsburgh	15.5	13.5	5.0	11.0
Allentown	14.5	13.25	5.0	11.0
Erie	14.5	13.0	5.0	11.0
Scranton	14.5	13.25	5.0	11.0
Altoona	15.5	13.5	5.0	11.0
Dover, Del.	14.5	....	5.0	11.0
Wilmington	13.5	....	5.0	11.0
Springf'd, Mass.	13.8	....	4.0	7.5
Worcester	14.3	....	4.0	8.0
Hartford, Conn.	13.6	....	4.0	7.5
NewHaven	13.5	....	4.0	8.0
Providence, R.I.	12.5	....	3.0	7.5

Atlantic has transferred all stations to dealers except in Philadelphia and Pittsburgh where prices are 17.5 and 20.0 cents per gallon respectively.

Price basis to undivided dealers—Dealer tank-wagon less .5 cent per gallon.

Consuming accounts not under contract—when made by tank-wagon in quantities of 50 gallons or over, dealer price.

Commercial accounts under contract—annual consumption 2,500 to 100,000 gallons per year, 1 cent above posted tankcar price; over 100,000 gallons per year, .5 cent above posted tankcar price.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wag.	Dir.	Inc. tax	tank-wag.
Omaha	17.4	15.9	5.0	10.4
McCook	18.1	14.3	5.0	11.1
Norfolk	17.8	16.3	5.0	10.8
North Platte	18.2	16.7	5.0	11.2
Scotts Bluff	18.9	17.4	5.0	10.9

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective Jan. 1, 1935.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wag. dir.	Tank car con'r.	Inc. tax	tank-wag.
N. Orleans, La.	20.0	17.5	*10.0	†11.0
Baton Rouge	18.0	15.5	8.0	12.0
Alexandria	18.5	16.0	8.0	12.0
Lafayette	19.0	16.5	8.0	12.5
Lake Charles	19.0	16.5	8.0	12.5
Shreveport	17.5	15.0	8.0	11.0
Knoxville, Tenn.	21.0	18.5	8.0	14.0
Memphis	19.0	16.5	8.0	12.0
Chattanooga	20.5	18.0	8.0	13.5
Nashville	20.0	17.5	8.0	13.0
Bristol	19.75	18.5	8.0	14.5

*Includes 2-cent parish tax. †Includes 1 cent parish tax and 1 cent state tax

Standard of La. has transferred all stations to dealers except in New Orleans and Baton Rouge where station prices are 21.5 and 21.5 cents per gallon, respectively.

Price basis to commercial consumers: effective Dec. 21, 1936, deliveries of 50 gallons or more in one delivery, posted consumer tankcar price plus 2 cents per gallon; consumers taking deliveries of less than 50 gallons at one time pay posted consumer tankcar price plus 6 cents per gallon.

Louisiana kerosene prices include 1-cent state tax.

Naphtha

STANDARD OIL CO (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Dealer	Serv. sta.	Inc. tax	tank-wag
Muskogee, Ok.	15.5	....	5.0	7.0
Okla. City	13.0	....	5.0	8.0
Tulsa	14.0	....	5.0	8.0
Ft. Smith, Ark.	15.0	..	5.0	10.0
Little Rock	17.5	....	7.5	9.5
Texarkana	15.0	....	5.0	9.0

Texas

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Dallas, Tex.	14.0	18.0	5.0	8.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	14.5	18.5	5.0	8.0
San Antonio	14.5	18.5	5.0	8.0

Canada*

3 Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Gasoline			Kero
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Hamilton, Ont.	22.0	....	6.0	17.0
Toronto, Ont.	22.0	24.5	6.0	17.0
Brandon, Man.	29.8	32.8	7.0	23.3
Winnipeg, Man.	28.2	31.2	7.0	20.7
Regina, Sask.	29.5	....	7.0	22.0
Saskatoon, Sask.	32.3	....	7.0	24.8
Edmonton, Alta.	30.5	33.5	7.0	24.3
Calgary, Alta.	28.0	31.0	7.0	21.5
Vancouver, B. C.	22.0	26.0	7.0	23.0
Montreal, Que.	19.0	....	6.0	17.0
St. John, N. B.	24.0	28.0	8.0	18.0
Halifax, N. S.	24.0	28.0	8.0	18.5

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal when discounts below station prices are one-half cent per gallon less and in Vancouver where discounts are 1 cent per gallon more.

Retail Price Changes

Standard Oil Co. of New Jersey March 5 reduced tank-wagon kerosene .5 cent in Baltimore.

Standard Oil Co. of Kentucky February 23 reduced tank-wagon kerosene 1 cent in Birmingham; and March 8 reduced tank-wagon and dealer gasoline 1 cent; March 1 reduced tank-wagon kerosene 1.5 cents in Atlanta; February 20 reduced tank-wagon and dealer gasoline 4.5 cents in Augusta and March 1 advanced tank-wagon and dealer gasoline 2 cents in that city; March 3 reduced tank-wagon and dealer gasoline 1 cent in Pensacola.

New York Market

(Continued from Preceeding Page)

an advance in April or May not without some merit. Several key men in various oil companies in New York feel disinclined to consider the question seriously at the moment, basing their reticence on inability to predict weather conditions over the remainder of the winter and spring season in the north and northeastern heavy consuming districts. They feel that an early onslaught on gasoline stocks built up over the winter with a continuation of the proportionate consumption increase are the determining factors with reference to crude.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of March 16, 1937

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below (2d gr.)	.04⅝	.04⅞
63-67 octane	.05	.05⅛
68-70 octane (regular)	.05⅝	.05⅞
60-62 400 grades:		
62 octane and below (3d gr.)	.04⅝	.04⅞
63-67 octane	.05	.05⅛
68-70 octane (regular)	.05⅝	.05⅞
64-66 375	.05	.05⅛
68-70 360	.05⅛	.05⅜

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04⅝	.04⅞
63-67 octane	.05	.05⅛
68-70 octane (regular)	.05⅝	.05⅞
60-62 400	.04⅝	.05
64-66 375	.04⅞	.05

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:		
62 octane and below	.05⅝	.05½
63-67 octane		.05⅝
68-70 octane (regular)		.06¼

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
62 octane and below	.05	.05⅛
63-67 octane	.06	.06⅛
68-70 octane (regular)	.06¼	.06⅜

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04⅝	.04⅞
63-67 octane	.05	.05⅛
68-70 octane (regular)	.05⅝	.05⅞
60-62 400 grades:		
62 octane and below	.04⅝	.04⅞
63-67 octane	.05	.05⅛
68-70 octane (regular)	.05⅝	.05⅞
64-66 375	.05	.05⅛
68-70 360	.05⅛	.05⅜

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane		.04⅜
60-64.9 octane	.06¾	.07
65-70 octane	.07	.07⅛
64-66 375		.05⅛
68-70 350		.05½

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07	.08
58-60 400, 65 octane and higher	.07¾	.08¾

EAST COAST (domestic)—

U. S. Motor below 60 octane:		
*New York (Bayonne)		.06¾
Baltimore		.06¾
U. S. Motor, 60-64.9 octane:		
*New York (Bayonne)		.07
Philadelphia	.07	.07⅛
Boston		.07⅛
Baltimore	.07	.07⅛
Charleston, S. C.		.07⅛
U. S. Motor, 65 and above:		
*New York (Bayonne)		.07⅛
Philadelphia	.07⅛	.07½
Boston		.07½
Baltimore	.07⅛	.07½
Charleston, S. C.		.07½

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05½	.05⅝
60-64.9	.05⅝	.06
65 octane and higher	.06⅛	.06⅝

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.04⅝	.04¾
52-54 450 (blending)	.04⅝	.04¾
54-56 450 (blending)	.04¾	.04⅞

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.03
Grade 18-55	.03⅝	.03¾
Low vapor pressure grade:		
*14-pound v.p. (max.)	.04⅛	.04¼
*12-pound v.p. (max.)		.04⅜

*Nominal.

NORTH TEXAS—

Grade 26-70		.03
Grade 18-55	.03⅝	.03¾

CALIFORNIA—

75-85 375-390	.06¾	.07½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.03⅜

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 l.b.p., 110 flash, 540-550 e.p.	.04⅛	.04¼
41-43 gr., 300-350 l.b.p., 110-125 flash, 500-520 e.p.	.04	.04⅜
46-48 gr., 210-230 l.b.p., 480 max. e.p.	.04⅝	.04⅞

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04⅛	.04⅜
42-44	.04¼	.04½

NORTH TEXAS—

41-43	.04⅛	.04⅜

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.04⅜	.04½

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04⅝	.04⅞

PENNSYLVANIA (inland refineries)—

45		.05
46		.05⅛
47		.05¼

CHICAGO (Based on Group 3)—

41-43	.04⅛	.04¼
42-44	.04⅛	.04½

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04	.05

NEW YORK (Bayonne, N. J.)—

41-43	.05½

*GULF COAST (domestic)—

41-43	.05⅜

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03⅞	.04
No. 1 straw, 38-40	.03⅝	.03⅞
No. 2 straw, 32-36	.03⅜	.03½
No. 2 dark, 32-36	.03¼	.03⅜
No. 3, zero to 15, 28-32	.03¼	.03⅜
No. 3, 15 and above, 28-32	.02½	.02⅝

NORTH TEXAS—

No. 1 prime white, 38-42	.03⅞	.04
No. 1 straw, 38-40	.03⅜	.03⅞

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03½	.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03⅝	.03¾

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-40	.04	.04⅛
No. 1 straw, 38-40	.03⅝	.03⅞
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03⅜	.03½
No. 3 zero to 15, 28-32	.03¼	.03½
No. 3, 15 and above, 28-32	.02⅝	.02⅞

NEW YORK (Bayonne, N. J.)—

*No. 1		.05⅝
*No. 2		.05
*No. 4		.04¾

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal.; fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02¾	.02⅞
No. 4, low cold test, 24-28	1.10	1.15
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.87½	.92½
Below 18 fuel oil, industrial	.80	.87½

NORTH TEXAS—

U.G.I. gas oil	.02¾	.02⅞
No. 4, low cold test, 24-28	1.10	1.15
No. 5, low cold test, 18-22	.87½	.92½
Below 18 fuel oil, industrial	.80	.85

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

10-14 fuel oil, industrial	.75	.85

ARKANSAS (Ark., N. La. and Miss. delivery)—

10-14 fuel oil, industrial	.70	.72½

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅝	.02⅞
No. 4, low cold test, 24-28	1.10	1.15
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.87½	.92½
No. 6, low cold test, 10-16	.80	.85

PENNSYLVANIA (inland refineries)—

36-40	.04⅝	.04½

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.05	1.25
24 plus diesel (bunkers)	1.15	1.35
12-16 (bunkers at tidewater)	.90	1.00
10-16 (cargo lots)	.70	.95
12-17 (tankers)	.75	.95
San Joaquin Valley:		
10-18 (tankcars)	.70	.90
24 plus diesel, per bbl.	1.00	1.35
San Francisco:		
27 plus diesel		1.40
24 plus diesel (bunkers)		1.40
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03⅝	.04
28-30 diesel (bunkers)		1.65
Bunkers (bulk cargoes)		.95
Bunker C (bunkers)		1.00

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04¾
28-30 diesel (lighterage 6¾c per bbl.)		1.85
28-30 diesel (tankcars)		.04¾
*Bunker C (to ocean-going ships in N. Y. harbor)		1.15
Industrial fuel (tankcars)		.04½

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—

Bright Stocks:	
190-200 D, 15-25	.23
150-160 D, 0-10	.20
150-160 D, 15-25	.19½
150-160 E, 15-25	.19
100-110 D, 0-10	.18
Steam refined:	
631 green (treated)	.16½
600 dark green (untreated)	.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 145-50 at 210, 540-550 flash):		
10 pour test	.28	.28½
15 pour test	.27	.27½
20 pour test	.26	.26½
25 pour test	.25	.25½
Steam refined:		
600		.17
650		.18
600 Pennsylvania flash		.19½
630 flash		.23½
600 Warren E filtered		.19½

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:	
150-3	.09
180-3	.10
180-4	.09½
200-3	.10½
200-4	.10
250-3	.11½
250-4	.11
280-3	.11½
280-4	.12
300-3½	.13
400-3½	.14
100-2½ paraffin oil	.05¾
15-20 Cold Test:	
200-3	.10
200-4	.09½
250-3	.11
250-4	.10½
280-3	.12
280-4	.11½

GULF COAST—

Pale Oils:		
200-3	.07	.07½
300-3	.07½	.07¾
500-3½	.08½	.08¾
750-3½	.08¾	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red Oils:		
200-5-6		.07
300-5-6	.07½	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3	.07	.08
200-2½-3	.07	.08
300-2½-3	.07	.08
400-3-4	.09	.11
450-3-4	.09	.11
550-3-4	.09	.11
600-3-4	.09	.11
Red Oils:		
200-4-5	.07	.08
300-5-6	.07	.08
350-5-6	.10½	.11½
400-5-6	.10½	.11½
450-5-6	.10½	.11½
500-5-6	.10½	.11½
600-5-6½	.10½	.11½
700-6½ plus	.10½	.11½
750-6½ plus	.10½	.11½
900-6½ plus	.10½	.11½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:		
Zero pour test	.23½	.24
10 pour test	.22½	.23
15 pour test	.22	.22½
25 pour test	.21	.21½
180 vis. at 70° F., 3 color:		
25 pour test	.23½	.24
200 vis. at 70° F., 3 color:		
Zero pour test	.27	.27½
10 pour test	.26	.26½
15 pour test	.25½	.26
25 pour test	.24½	.25

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02¾

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0265	.0270
124-126 (a.m.p.) w.c. scale	.0270	.0275

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0250	.0255
124-126 (a.m.p.) y.s.	.0260	.0265
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.05½
60-62 400	.05⅝
61-63 390	.05⅝ .05¾
64-66 375	.05⅞ .06

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04¾
55-65 octane	.04¾	.05
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white	.05	.05¼
41-43 water white	.05½	.05⅝
44 water white	.05⅝	.05¾

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbls.)—

Cylinder Stocks:	
600 Warren E	.26½
600 S.R. unfiltered	.23½
630 S.R. unfiltered	.25
600 flash, S.R.	.26
630 flash, S.R.	.28
Bright Stocks:	
8 color	.31
6½ plus color in dilution	.30½

NEUTRAL OIL

200-3 color	.29½
150-3 color	.26½

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0260	.0270
124-126 y.s.	.0245	.0250

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 28, 1937)

East Texas*	$1.27
Van, Tex.†	1.10
Camp Hill, Tex.	1.27
Cass County, Tex.‡	1.25
Talco	.73
Altus and Tipton, Okla.§	1.20
Other fields (see gravity table).	

*All companies, †Humble Oil & Refining Co.; Pure Oil Co. ‡Texas Co. §Gulf Oil Co. Talco by Humble Oil & Refining Co.

West Texas

See gravity table.

Pecos County*	.91
Pecos shallow†	.81

*Shell Petroleum Co., Gulf Pipe Line Co., and Humble Oil & Refining Co. †Shell Petroleum Corp.

Gulf Coast

(January 28, 1937)

Choctaw and Darrow, La.	See note below
Clay Creek, Tex.	$1.00
Garden Island, La.	1.37
Cleveland, Tex.	1.27
Hardin, Tex.	1.15
Tomball, Tex.	1.30
Lafitte, La.	1.24
Livingston, Tex.	1.27
Satsuma	1.20
Heyser, light (Nov. 1, 1936)	1.15
Heyser, heavy (Nov. 1, 1936)	.90
Placedo (Nov. 1, 1936)	.90
Welsh, La.	.98
Tepetate (La.) (Jan. 4, 1937)	1.12

Greta, Refugio, O'Connor, McFadden, Saxet, Segno, Taft, Tom O'Connor and Plymouth take same gravity prices as Gulf Coast. Duval, Jim Hogg, Webb and Zapata counties, Texas, and Heyser and Placedo fields take Mirando gravity prices. Jennings, La., 5 cents lower than Gulf Coast prices on each degree. Segno, Texas, takes Gulf Refining Co.'s Gulf Coast prices. Choctaw and Darrow, Louisiana, posted for first time by Standard Oil Co. of Louisiana, start below 21 degrees at 90 cents, with 3-cent differential up to 25 gravity, then 2-cent differential up to 40 and above, $1.36.

Rocky Mountain States

(Effective January 28, 1937)

Iles, Colo., light*	$1.18
Iles, Colo., heavy*	1.12
Greybull, Wyo.*	1.30
Torchlight, Wyo.*	1.30
Grass Creek, Wyo., light*†	1.30
Grass Creek, Wyo., heavy (Nov. 4, 1936)*†	.62
Hamilton Dome, Wyo. (Nov. 4, 1936)*	.57
Elk Basin, Wyo., light*†	1.30
Frannie, Wyo., heavy*	.62
Frannie, Wyo., light	.82
Hogback, N. Mex.*‡	1.33
Pondera, Mont. (Jan. 26, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.23
Rock Creek, Wyo.†	1.29½
Lea County, N. M. (see West Texas gravity table).	
Artesia, N. Mex.	.90
Maljamar, N. Mex.	.90
Canon City and Florence, Colo.	1.10
Florence, Colo.	.98
Lance Creek, Wyo.	.97
Sunburst, Mont. (June 5, 1936)	1.20
Cat Creek, Mont.	1.40
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Middle Western States

OHIO OIL CO.
(Effective January 28, 1937)

Lima	1.25
Illinois	1.35
Princeton, Ind.	1.35
Midland, Mich.	1.42
West Branch, Mich.	1.26
Buckeye (March 16, 1937)	1.39½
Arenac, Mich.	1.26
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River	1.42
Kentucky River	1.50
Western Kentucky	1.40

Midland, Mich., price posted by Simrall Corp. and Pure Oil Co. includes Greendale, Porter, Beaverton, Crystal and equal grades. West Branch and Arenac by Simrall Corp., effective Jan. 29. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky.

Southwest Texas

(January 28, 1937)

Pettus	1.37
Salt Flat, Darst Creek, Hilbig, Carroll, Clark, Zoboroski	1.09
Luling	1.00
Lytton Springs	1.12

Saxet and Taft take same gravity table as Gulf Coast.

North Louisiana and Arkansas

Smackover, all grades	$ .90
Tullos and Urania	1.92
El Dorado East field	.90
Union County, Ark.	.90
Ouachita County, Ark.	.90

Eastern States

TIDE WATER PIPE LINE CO.
(Effective Feb. 24, 1937)

Bradford, Pa.	$2.67
Allegany, N. Y.	2.67

SOUTH PENN OIL CO.
(Effective Feb. 24, 1937)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.67
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.42
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.37
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.22
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Sept. 18, 1936)	1.32

PENNZOIL CO.
(Effective Feb. 24, 1937)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	2.67
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.66
Includes Tidioute district.	
Group C	2.65
Includes Turkey and Tidioute districts.	
Group D	2.64
Includes Bear Creek and Porkey districts.	
Group E	2.61
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	
Price depends on lengths of pipe line haul to plant at Oil City.	

PURE OIL CO.
(Effective Feb. 24, 1937)

Cabin Creek, W. Va.	2.37
Bradford Hollow, W. Va.	2.37
Kelly Creek, W. Va.	2.37

Canada

Ontario (Sept. 9, 1933)*	
Petrolia	$2.10
Oil Springs	2.17
Turner Valley, Alberta province (Dec. 16, 1936):†	
Clear naphtha	$2.60
Discolored naphtha, 65 gravity and higher	2.36
Discolored naphtha and crude oil, 40-40.9 gravity	1.55
Increasing 3 cents for each degree of gravity with top price for 64-64.9 gravity	2.37

These prices delivered field tankage.
*Imperial Oil, Ltd.
†Imperial Oil, Ltd., and Regal Oil & Refining Co. On crude oil alone British American Oil Co. posted above prices on December 9, 1936.

Mexico

Panuco*	$1.24

*In U. S. Currency, f.o.b. ship, based on February spot market transactions.

Crude Oil Price Changes

The Simrall Corp., Mount Pleasant, Mich., posted a price in the new Buckeye field in Gladwin County, Michigan, effective March 16. The price is $1.39½ cents per barrel.

New Mexico Production

Daily average production week ending March 13:

Cooper	7,400
Eaves	920
Eunice	30,550
Hardy	960
Hobbs	22,380
Jal	1,790
Langlie	1,190
Lynch	920
Lynn	190
Mattix	880
Monument	27,450
Penrose	1,820
Skelly	1,020
South Eunice	1,000
Vacuum	90
Artesia	3,060
Getty	500
Hogback	200
Rattlesnake	820
Table Mesa	90
Total New Mexico	103,240

Texas Wildcats

(Continued from Page 115)

1,540 ft. from S lines sec., 10 mi. W Albany. Drlg. 350 ft.

Ungren & Frazier No. 1 McCowan, NW cor. county, sec. 158, B.B.B.&C. Sur. Drlg. 1,800 ft.

Ungren & Frazier et al No. 1 Snyder, 3 mi SW Sedwick, sec. 26, L.A.L. Sur. Drlg. 2,945 ft.

Stephens County

Aarco O. & G. Co. No. 1 Atkins, 2½ mi. E Crystal Falls, sec. 1,129, T.E.&L. Sur. Spd. and S.D.

C. B. Christie et al No. 1 E. S. Maury, 4 mi. W of Crystal Falls, J. Koehler Sur. Abst. 26. S.D. 3,600 ft.; M.I.M. to C.O.

W. T. Garret et al No. 1 Echols, 6 mi. SE of Ivan, W½, sec. 10, Blk. 3, S.P.R.R. Sur. Drlg. 3,525 ft.

Hanrahan & Bedingfield No. 1 Guest, 2 mi NW Frankell, sec. 30, T.&P. Sur., Blk. 6. Spud. and S.D.

Mudge Oil Co. No. 1 S. H. Hill, 3 mi. SW Eliasville, sec. 1,122, T.E.&L. Sur. Drlg. 1,360 ft.

Tarrant County

E. E. Hoffpauir et al No. 2 W. H. Davis 2 mi. S Arlington, H. Blackwell Sur. Drlg. 2,020 ft.

Taylor County

Dunn & McAlister No. 1 Bowles, NE cor. county, 150 ft. from S and E lines, SW¼ sec. 28, B.A.L. Sur. O.W.D.D.; drlg. 1,670 ft.

Golden Pet. Co. No. 1 C. B. Braune, sec. 15, League 144, Guadalupe Co. School Lands Sur. M.I.R.

Wm. Hix & Co. No. 1 A. H. Spencer, sec. 413, A. McBerth Sur., 5 mi. E Tuscola. Loc. for 4,500-ft. test.

Hal Hughes et al No. 1 Manahan, 5 mi. E Abilene, sec. 14, L.A.L. Sur. Drlg. 350 ft.

Throckmorton County

Wise County

Latex Oil Co. No. 1 Smith, 3 mi. E Bridgeport, Jas. Couch Sur., Abst. 104. Spd. and S.D.

Texas-Canadian Dev. Co. No. 1 T. N. Maxwell, NE cor. county, Isham Epps Sur. S.D. 4,040 ft.

Crude Prices by Gravities

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	Oklahoma-Kansas	Oklahoma-Kansas	North and Central Texas	East Central Texas (Mexia district)	North Louisiana-Arkansas	Gray County, Texas	Hutchinson-Carson counties, Texas	Rodessa, Louisiana-Texas and Panola County, Texas	Conroe, Tomball, Raccoon Bend, Satsuma, Texas	Gulf Coast	Gulf Coast	West Texas except Pecos County, Lea County, N. Mex.	Mirando district, Texas	Marion County, Texas	Government Wells, Texas	Anahuac, Texas	White Castle, Louisiana	Iowa, Louisiana	Cayuga, Texas
Below 18	....	....	....	....	....	....	....	....	....	$.90	....	....	....	....	....	....	....	....	....
18-18.9	....	....	....	....	....	....	....	....	....	.92	....	....	....	....	....	....	....	....	....
19-19.9	....	....	....	....	....	....	....	....	....	.94	....	....	....	....	....	$.92	$.94	$.84	....
20-20.9	....	....	....	....	....	....	....	....	....	.96	$.95	....	$.90	....	$.90	.94	.96	.86	....
21-21.9	....	....	....	....	....	....	....	....	....	.98	.98	....	.93	....	.93	.96	.98	.88	....
22-22.9	....	....	....	....	....	....	....	....	....	1.01	1.01	....	.96	....	.96	.98	1.01	.91	....
23-23.9	....	....	....	....	....	....	....	....	....	1.04	1.04	....	.99	....	.99	1.00	1.04	.94	....
24-24.9	....	....	....	....	....	....	....	....	....	1.07	1.07	....	1.02	....	1.02	1.02	1.07	.97	....
Below 25	....	$.98	....	....	$.90	....	....	$.93	....	....	....	....	....	$.90	....	....	....	....	$.88
25-25.9	....	1.00	....	....	.92	....	....	.95	....	1.10	1.10	$.78	1.05	.92	....	1.04	1.10	.99	.90
26-26.9	....	1.02	....	....	.94	....	....	.97	....	1.13	1.13	.80	1.08	.94	....	1.06	1.13	1.03	.92
27-27.9	....	1.04	....	....	.96	....	....	.99	....	1.15	1.15	.82	1.10	.96	....	1.08	1.15	1.05	.94
28-28.9	....	1.06	....	....	.98	....	....	1.01	....	1.17	1.17	.84	1.12	.98	....	1.10	1.17	1.07	.96
Below 29	$1.06	....	$.96	$1.03	....	....	....	....	$1.20	....	....	....	....	....	....	....	....	....	....
29-29.9	1.08	1.08	.98	1.05	1.00	....	....	1.03	1.22	1.19	1.19	.86	1.14	1.00	....	1.12	1.19	1.09	.98
30-30.9	1.10	1.10	1.00	1.07	1.02	....	....	1.05	1.24	1.21	1.21	.88	1.16	1.02	....	1.14	1.21	1.11	1.00
31-31.9	1.12	1.12	1.02	1.09	1.04	....	....	1.07	1.26	1.23	1.23	.90	1.18	1.04	....	1.16	1.23	1.13	1.02
32-32.9	1.14	1.14	1.04	1.11	1.06	....	....	1.09	1.28	1.25	1.25	.92	1.20	1.06	....	1.18	1.25	1.15	1.04
33-33.9	1.16	1.16	1.06	1.13	1.08	....	....	1.11	1.30	1.27	1.27	.94	1.22	1.08	....	1.20	1.27	1.17	1.06
34-34.9	1.18	1.18	1.08	1.15	1.10	....	....	1.13	1.32	1.29	1.29	.96	1.24	1.10	....	1.22	1.29	1.19	1.08
Below 35	....	....	....	....	....	$.96	$.91	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.20	1.20	1.10	1.17	1.12	.98	.93	1.15	1.34	....	1.31	.98	1.26	1.12	....	1.24	....	1.10	....
36-36.9	1.22	1.22	1.12	1.19	1.14	1.00	.95	1.17	1.36	....	1.33	1.00	1.28	1.14	....	1.26	....	....	....
37-37.9	1.24	1.24	1.14	1.21	1.16	1.02	.97	1.19	1.38	....	1.35	1.02	1.30	1.16	....	1.28	....	....	....
38-38.9	1.26	1.26	1.16	1.23	1.18	1.04	.99	1.21	1.40	....	1.37	1.04	1.32	1.18	....	1.30	....	....	....
39-39.9	1.28	1.28	1.18	1.25	1.20	1.06	1.01	1.23	1.42	....	1.39	1.06	1.34	1.20	....	1.32	....	....	....
40 and over	1.30	1.30	1.20	1.27	1.22	1.08	1.03	1.25	1.44	....	1.41	1.08	1.36	1.22	....	1.34	....	....	....

Column 1—Companies posting are Barnsdall, Bell, Champlin, Continental, Cushing, Derby, Dickey, Eason, El Dorado, Empire, Falcon, Globe, Gulf, Johnson, Kanotex, National, Phillips, White Eagle, Stanolind, Sunray, Texas, Sun, Vickers and Wilcox.
Column 2—Anderson & Prichard, Carter, Cosco, Deep Rock, Magnolia, Mid-Continent, Pure, Rock Island, Shell, Sinclair, Skelly and Tide Water.
Column 3—All purchasers.
Column 4—Humble Oil & Refining Co. and Sinclair Crude Oil Purchasing Co.
Columns 5, 6, 7 and 8—All purchasers.
Column 9—Humble Oil & Refining Co. and Sun Oil Co. Tide Water Oil Co.'s schedule starts at 35 degrees, $1.34 with 2-cent spread up to 40 and over at $1.44. (Raccoon Bend prices are for deep sand oil.)
Column 10—The Texas Co. (Gulf Refining Co. pays same prices up to and including 34 gravity, but continues its 2-cent spread up to 40 and over at $1.41.)
Column 11—Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Sun Oil Co.
Column 12—All purchasers.
Column 13—Humble Oil & Refining Co.
Column 14—Magnolia Petroleum Co.
Column 15—Sun Oil Co.
Column 16—Gulf Refining Co.
Column 17 and 18—Shell Petroleum Corp.
Column 19—Tide Water Oil Co.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl M. Pforzheimer & Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1937 High	1937 Low	Week ended Mar. 13 Sales	Week ended Mar. 13 High	Week ended Mar. 13 Low	Week ended Mar. 13 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
114⅞	101	10,500	114⅞	110	113½	Amerada Corp.	788,675	N.P.	50cQ	1-30-37	$2.00	125½	75	80	48½
37	30⅛	56,700	37	33½	35½	Atlantic Refining	2,664,904	$25	25cQ	3-15-37	1.25	35⅛	26⅝	28	20½
43⅜	35⅞	31,000	43⅜	40⅝	41	Barber Co.	387,149	$10	50c	12-10-36	.50	38½	21	22½	11¾
35¼	26⅛	92,400	34½	30½	32¼	Barnsdall Oil Co.	2,131,090	$5	25cQ	2-1-37	.80	28¼	14⅛	14¾	5⅞
20⅞	16⅝	97,900	18¼	16⅝	16¾	Columbia Gas & Elec.	11,610,036	N.P.	20c	11-16-36	.40	23⅜	14	15¾	3⅜
17¾	15⅜	222,700	17¾	16⅜	17¼	Consolidated Oil Corp.	13,983,287	N.P.	20cQ	5-15-37	.80	17¼	11½	12¼	6½
45½	40¼	54,500	45½	41⅛	44½	Continental Oil of Delaware	4,682,671	$5	25cQ	3-29-37	1.50	44⅞	28⅛	35	15⅛
17⅝	12½	54,100	16¼	14⅝	15⅝	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	13⅞	6⅜	7	1½
35⅜	29¼	30,400	35⅜	33	34⅜	Mid-Continent Petroleum	1,843,872	$10	75cSA	12-1-36	1.15	30⅞	17¼	20½	9½
33	26⅞	5,300	33	30½	30⅞	Mission Corporation	1,399,345	N.P.	....	.....	.45	29⅞	16¾	17¾	10⅜
85½	62	15,600	85½	75	81¾	National Supply of Delaware	382,591	$25	....	5-15-31	....	75½	19⅞	20⅞	9
22½	17⅛	218,100	22½	18¼	22½	Ohio Oil Co.	6,563,377	N.P.	35cSA	12-15-36	.60	18	12⅛	14¼	9¼
29	22¼	8,700	29	27	28	Pacific Western Oil	1,000,000	N.P.	65c	12-18-36	.65	23½	11¾	14	6¾
4½	2¾	2,100	3½	3¼	3¼	Panhandle P. & R.	198,770	N.P.	....	.....	....	4¼	1⅜	1⅞	½
58½	49½	31,600	58½	54¾	57	Phillips Petroleum	4,152,836	N.P.	50cQ	3-1-37	2.50	52⅜	38⅛	40	13¾
27⅝	24⅝	28,600	27⅝	25¼	25⅜	Plymouth Oil Co.	1,050,000	$5	35cQ¶	3-31-37	.90	27¾	11⅞	13	6½
24⅜	19½	87,400	22⅞	21⅝	22	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	24⅞	16	17	5⅞
48½	40¼	28,300	48½	43¾	46¾	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	3-15-37	1.00	44	30½	36⅞	20¾
34¾	26⅞	14,400	33⅞	32¼	33⅛	Shell Union Oil	13,070,625	N.P.	25c	12-15-36	.25	28¼	14¾	16½	5½
105⅜	102¼	800	104	102⅞	103¼	Shell Union Oil 5½% pfd.	400,000	$100	26⅛c	12-15-36	28.87½	127½	102	111	63⅛
4⅛	3½	1,100	3¾	3¾	3¾	Simms Petroleum	461,698	$10	50c liq.	1-9-37	2.25 liq.	6¾	3½	18¾	4¾
52⅜	42	17,500	52⅜	48⅛	50⅜	Skelly Oil	1,008,514	$15	....	12-15-30	....	47⅜	19½	20½	6½
19½	16¼	119,000	19½	18¾	19	Socony-Vacuum	31,151,075	$15	25cSA	3-15-37	.70	17½	12½	15¾	10⅝
50	43¼	34,400	49⅝	47⅝	48½	Standard Oil of California	13,014,754	N.P.	30cQ¶	3-15-37	1.20	47⅝	35	41⅛	27¾
50	46½	18,100	49	47⅛	48	Standard Oil (Indiana)	15,215,677	$25	40cQ¶	3-15-37	2.40	48½	32¾	33⅜	23
32	25	400	32	31¼	32	Standard Oil of Kansas	200,000	$10	$1	12-26-36	1.00	31	25	32	20
76	67¾	69,900	76	72¾	73⅜	Standard Oil of New Jersey	25,856,081	$25	$1.25SA¶	12-15-36	2.00	70⅜	51⅛	52⅝	35¾
77½	71	1,300	73½	72	72	Sun Oil	1,733,013	N.P.	25cQ	3-15-37	$1 & 6% Stk.	91	70	77	60½
60	50¾	195,800	60	56¼	58⅞	Texas Corp.	9,340,069	$25	50cQ	4-1-37	1.50	55¼	28⅞	30¼	16½
9½	7⅞	106,600	9½	8¼	9	Texas Gulf Producing Co.	888,113	N.P.	5c	12-15-36	.05	8⅞	4⅜	4⅜	2½
16⅝	13⅛	33,500	16¼	14⅜	15	Texas Pacific Coal & Oil	880,703	$10	10c	3-1-37	.25	15¼	7½	9¼	3¼
21⅝	20¼	46,700	21¼	20⅝	20⅞	Tide Water Associated	5,642,342	N.P.	15cQ	3-1-37	.70	21¾	14¾	15⅞	7⅝
108	105⅛	1,700	106⅜	106⅛	106⅛	Tide Water Associated pfd.	626,221	$100	$1.50Q	1-2-37	6.00	106½	100⅝	104½	84
28¼	24⅞	41,700	27¼	26¼	26⅜	Union Oil of California	4,386,070	$25	25cQ	11-10-36	1.00	28½	20¾	24	14¾
31¼	26⅝	1,100	29¼	28⅛	28⅛	Union Tank Car Co.	1,200,000	N.P.	40cQ	3-1-37	1.20	31⅝	22⅝	26½	20⅞
6¼	4½	5,600	5⅞	5½	5½	Wilcox Oil & Gas	424.839	$5	....	5-10-28	....	5¼	2¾	3⅛	1

*Ex-dividend. †Plus extras ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ¶Dividend 4/75 Mission Corp. paid 3-15-35. ¶Includes extras. **Plus 6% stock.

New York Curb Exchange

1937 High	1937 Low	Week ended Mar. 13 Sales	Week ended Mar. 13 High	Week ended Mar. 13 Low	Week ended Mar. 13 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
21⅜	17⅛	1,400	18⅜	17⅞	18	Bridgeport Machine Co.	260,000	N.P.	$1	12-21-36	$1.00	21	13¼	14⅛	3¾
49½	46	50	49	49	49	Buckeye Pipe Line Co.	200,000	$50	$1Q	3-15-37	3.25	50	39¾	42½	30½
2¾	2⅛	9,900	2⅜	2⅛	2⅜	Carib Syndicate	799,020	25c	....	.....	....	4⅞	1⅞	4¼	1⅝
115½	110¼	150	113	112½	113	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	3-29-37	7.00	124¾	105	157	115
5⅜	4	78,100	4⅜	4	4	Cities Service	37,804,394	N.P.	....	6-1-32	....	7⅜	3	3¼	⅝
4⅝	2⅝	9,000	3	2⅝	2⅝	Cosden Oil	399,687	$1	....	.....	....	4½	1½	1½	¼
38	31⅞	8,600	34	32⅛	33⅛	Creole Petroleum	6,974,356	$5	25cSA	12-15-36	.50	39	19⅞	23¾	10
18⅝	16	2,600	17¼	16¼	16⅝	Darby Petroleum	351,390	$5	25cSA	1-15-37	.50	18⅛	9	8⅞	4
7⅞	5¼	2,200	6¾	6⅜	6⅛	Derby Oil & Refining	263,162	N.P.	....	.....	....	6¾	1⅞	2	¾
47¼	46½	50	43½	43½	43½	Eureka Pipe Line	50,000	$50	$1Q	11-2-36	4.00	47½	38½	38	33¼
63½	56	10,700	60¼	58	58	Gulf Oil Corp.	9,076,202	$25	25cQ	4-1-37	1.50, 100% Stk.	59	36	74¾	50¼
87	77½	7,600	85½	83¾	84	Humble Oil & Refining	8,923,935	N.P.	37½cQ	4-1-37	1.50	80	57	64	44
24¼	21	8,900	24¼	23¼	23¼	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	12-1-36	1.25	24½	19¾	22½	15⅜
14⅞	7¾	6,700	14⅞	12½	14⅝	Indiana Pipe Line	300,000	$10	20c Spl.	12-17-36	.80	9¾	5½	6⅛	3⅝
39½	33¾	12,500	38¾	36½	37	International Petroleum	14,247,088	N.P.	$1.25†‡	12-1-36	2.50	39⅝	32⅝	39¾	28
15¼	12⅛	16,500	13¼	12⅜	13¼	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	3-15-37	.50	15⅜	9⅞	11⅜	4⅜
19½	16⅛	5,600	18	17⅜	17⅜	Lion Oil Refining	270,000	N.P.	25cQ	12-26-36	.75	17¾	7⅜	8⅛	3½
14¼	11⅝	6,500	12⅞	12¼	12⅛	Lone Star Gas	5,382,723	N.P.	20c	4-20-37	.60	14¼	9⅞	10⅞	4½
7⅞	6	4,500	7⅛	6⅝	6¾	Mountain Producers	1,682,182	$10	30cSA	12-21-36	.60	8⅜	5	5¾	4⅛
19½	17	1,900	17¾	17	17	National Fuel Gas	3,810,183	N.P.	25cQ	1-15-37	1.00	23	17⅜	20	11¾
11⅞	10	1,700	11⅛	10⅝	11	National Transit	500.000	$12.50	35cSA	12-15-36	.75	15¾	9¼	10⅝	6¾
6	4¾	No sales ..	..	..	..	New Bradford Oil	1,445,202	$5	15cSA	4-15-37	.10	4⅝	2⅞	3¼	2
5	3½	1,400	3⅝	3½	3½	New Mexico and Arizona	1,000,000	$1	1c	12-1-36	.01	6⅝	1⅝	2½	1
5¼	5⅛	100	5	5	5	New York Transit	100,000	$5	15cSA	10-15-36	.35	6¼	4¼	4⅞	3
10⅛	7½	3,400	10⅛	9⅜	10⅛	Northern Pipe Line	120,000	$10	35c	1-2-37	.40	9¾	4⅞	8	5¼
9⅝	6¾	29,300	7¼	6¾	6⅞	Pantepec Oil	1,608,700	N.P.	....	.....	....	10⅛	3¼	4⅜	1¼
13¾	9½	4,600	10⅛	9½	10	Root Petroleum Co.	336.045	$1	25c	11-2-36	.50	19¼	4½	5	1½
6½	4¼	1,900	5	4½	4½	Ryan Consolidated	296,931	N.P.	....	.....	....	4¾	1⅞	2½	⅝
48	44	2,100	47	46	47	South Penn Oil	1,200,000	$25	60cQ†	3-29-37	2.60	44	32½	34½	21⅝
7¼	5	1,600	7¼	6	7¼	Southern Pipe Line	100,000	$10	20cSA	3-1-37	.25	7⅞	3¼	5	3⅞
42	38	100	34	34	34	South West Penna. Pipe Lines	35,000	$50	50cQ	4-1-37	13.00	60	44	56	44¼
20⅜	19⅛	4,400	19½	19⅛	19⅛	Standard Oil of Kentucky	2.604.790	$10	25cQ	3-15-37	1.35	23⅜	17⅛	24	18
13½	11½	No sales ..	..	..	..	Standard Oil of Nebraska	188.403	$25	25c	3-29-37	.25	14⅝	11	12	7¾
45	33⅛	6,800	45	43½	44⅛	Standard Oil of Ohio	753,740	$25	25cQ	3-15-37	2.00	40	21¾	23⅝	11½
4⅞	4	26,200	4⅞	4⅝	4¾	Sunray Oil	1,910,748	$1	5c	4-26-37	.10	5	2⅝	2⅞	⅞
7⅝	6⅛	3,000	7	6⅞	6⅞	Texon Oil & Land	336,028	$2	15cQ	3-31-37	.60	9¾	5⅜	6⅞	5

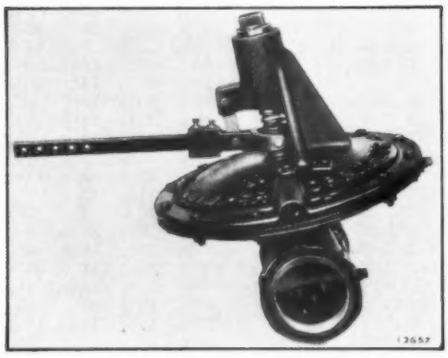
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds. §New stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

New Design Offered in Burner for Firing Oil-Field Boilers

Natural Gas Equipment Co., of Texas, is introducing an improvement in the N.G.E. Nelson series 1000 gas burner for firing oil field boilers. A



newly designed damper operator combines the diaphragm mechanism with the gas valve in such a way that any increase in the gas pressure sufficient to open the gas valve will also open air-louvres to the burners in the correct volume, affording controlled combustion. The gas valve is designed to produce a graduated flow in proportion to valve-lift so that the air flow through the burner and the gas flow may be adjusted with extreme accuracy. The valve is a single-port valve with V-shaped slots through which the gas is admitted to the burner-header as the valve opens.

The compactness of this device, which obtains automatic air-gas proportioning, eliminates the use of the clevises and connecting links which ordinarily combine diaphragm mechanism with the gas valve. It has also made possible the elimination of all stuffing-boxes. Admittance of air supply to the interior of the burner-box has also been improved by placing three louvre doors on each side of the burner instead of in the ends of the box structure. Advantages of the new burner enumerated by the manufacturer include installation time of 45 minutes, elimination of firebrick combustion chamber, masonry and brickwork; full portability, permitting quick installation or easy removal when boiler locations are changed; and extreme manifolding flexibility, suiting it to installation in any type, size or make of boiler.

Here and There With Men Who Manufacture Equipment

Macwhyte Co., Kenosha, Wis., maker of wire lines, has assigned L. A. Hines to cover the Texas oil fields as a special traveling representative. Mr. Hines was in charge of the company's office and warehouse stock in Fort Worth. Replacing Mr. Hines in Fort Worth, is Goodwin Johnston from the general offices in Kenosha.

New York Belting and Packing Co. has appointed Biggs-Kurtz Hardware Co., Grand Junction, Colo., distributor of its line of mechanical rubber goods in that area.

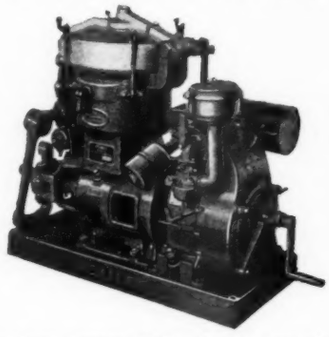
Foote Bros. Gear and Machine Corp. has made the following changes in sales personnel: E. G. Akridge is appointed direct factory representative in the Detroit territory, succeeding Thomas Lord, resigned. F. A. Emmons, Jr., takes over the territory vacated by Mr. Akridge. Harry Harrison has been appointed sales engineer in the central territory in Chicago.

At the annual meeting of Billings & Spencer Co. W. A. Purtell was elected president. Frederick C. Billings, former president, was elected chairman of the board. The other officers were reelected. James Allison, formerly field service metallurgist for the Union Drawn Steel Co., was made factory manager.

Foxboro Co., maker of industrial precision instruments and controllers, has moved its Atlanta, Ga., office to 101 Marietta Street Building.

Purifier for Diesel Engine Oil Is Put on Market by Goulds

Designed primarily for purifying fuel oil or lubricating oil for diesel engines in isolated stations where electric power is not available, Goulds

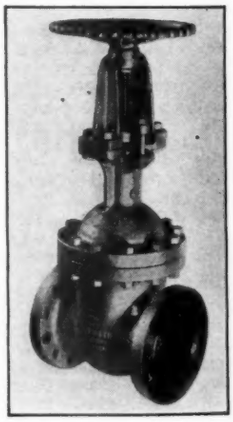


Pumps, Inc., Seneca Falls, N. Y., has placed on the market a compact, efficient gasoline-engine-driven centrifugal purifier.

The unit consists of standard series 300 Hydroil purifier mounted on a drip-type bedplate with a Briggs & Stratton 4-cycle engine driven through a special patented slip-type coupling. It is said to provide adequate purification of fuel oil in capacities up to 450 gallons an hour and lubricating oil up to 300 gallons an hour. One oil company is using one of these units on a truck for purifying fuel oil in batches at numerous diesel-operated pumping stations.

Late Engineering Features Are Found in Walworth Valves

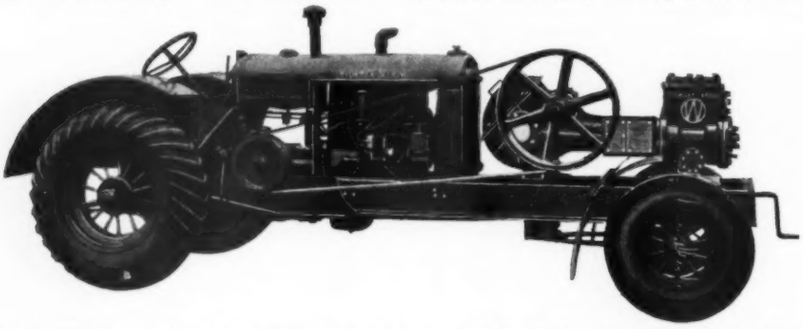
Heavy wall thicknesses, deep stuffing-boxes, oversize stems, streamline flow and steel handwheels with fluted nonslip rims are some of the latest engineering features included in the new Walworth steel gate-valves. They are now available for 150-pound and 300-pound steam pressures.



Made of carbon molybdenum steel (identification symbol C-1) to A.S.T.M. specifications A 157-36, the valves meet the requirements of all applicable specifications. The illustration shown here is from an unretouched photograph of one of the new 300-pound Walworth steel gate-valves.

WHEATLEY PORTABLE PUMP HAS WIDE RANGE OF USE

A portable, self-propelled pumping unit with an unusual range of utility is announced by Wheatley Brothers Pump & Valve Manufacturers of Tulsa. Wheatley reciprocating pump is built into a McCormick-Deering No. W-30 tractor, the frame being extended and the front trucks moved forward to permit mounting.



The pump is driven by a V-belt drive from the power takeoff on the tractor. The mobility of this unit makes it adaptable to producers' needs in connection with reclaiming tank bottoms, treating of mulsified oil, acidizing wells and water-supply systems. For refining and pipe-line use the pump is expected to find ready acceptance for general use where portability is desired.

The pump is built in two sizes, 4x6 and 6x6. It has few operating parts. Its features include enclosed crankcase, working parts running in a bath of oil. Timken tapered roller bearings, alloy-steel pinion gear, and semisteel spur gear mounted in center on steel crankshaft. The crankshaft is high-grade alloy steel, accurately machined. The cranks are set at 90 degrees to insure constant and uniform flow. Connecting-rods are also alloy steel with an ultimate strength of 90,000 pounds to the square inch. The pumps are equipped with strainers built in. Interchangeable liners are furnished for pressure up to 750 pounds. The motor can be operated on gasoline, kerosene, tractor fuel or any good grade of distillate.

Farrel-Birmingham Head Reelected

At the annual stockholders' meeting of Farrel-Birmingham Co., Inc., Ansonia, Conn., Nelson W. Pickering was reelected president. The following officers were also reelected: Franklin Farrel, Jr., chairman board of directors; Carl Hitchcock and Armin G. Kessler, vice presidents; Frederick M. Drew, Jr., treasurer; Laurie K. Blackman, assistant treasurer; George C. Bryant, secretary; William B. Marvin, assistant secretary. The entire board of directors was reelected, with the addition of Franklin Farrel III, representing the fourth generation of the Farrel family actively associated with the company.

Galvin General Sales Manager for Caterpillar Company

E. R. (Ed) Galvin, recently made general sales manager of the Caterpillar Tractor Co., left his position as general sales manager of Cleveland

E. R. GALVIN

Tractor Co. in 1928 to become a district representative for "Caterpillar," contacting in the field a small group of the company's dealers. Shortly thereafter he became sales manager in charge of the eastern sales division, with headquarters in Peoria, Ill. In January, 1936, he was appointed assistant general sales manager, from which position he was promoted March 1, 1937.

Mr. Galvin was for many years a member of the Du Pont organization, becoming manager of the sporting powder division. Making his work also his hobby, he long held a place close to the top among trapshooters of the United States and he has a collection of trophies.

H. P. Mee, vice president, relinquishes direct supervision of the sales department for the broader duties of directing all sales, service and advertising activities, and to assist more fully in general company administration.

Bulletins, Booklets and Other Literature for the Trade

"Molybdenum in Steel," "Molybdenum in the Foundry" and "Molybdenum in Industry" are beautifully printed booklets obtainable from Climax Molybdenum Co., 500 Fifth Avenue, New York.

The Worthington-Gamon Watchdog disc water meter, heavy-duty type, is the subject of a bulletin mailed on application by Worthington-Gamon Meter Co., Harrison, N. J.

"The Advantages of Reintjes Furnace Constructions" is the subject of a 12-page booklet obtainable from George P. Reintjes Co., Kansas City, Mo.

A booklet covering Page Hi-tensile F electrodes has been prepared for distribution by the Page Steel and Wire division of American Chain and Cable Co., Inc., Monessen, Pa. This shielded arc electrode is described, along with the shielded-arc method of welding.

The C. J. Tagliabue Manufacturing Co., Park and Nostrand Avenues, Brooklyn, N. Y., offer a new TAG laboratory thermometer and hydrometer catalog, No. 1100A. In addition to the regular line the catalog includes complete listings of the A.S.T.M. thermometers with illustrations, also the TAG-A.P.I. and TAG certified hydrometers. The company has also a new bulletin on self-operating controllers.

D. W. Haering & Co., Inc., 3408 West Monroe Street, Chicago, announces a 24-page illustrated catalog describing the operation and application of proportioning equipment. The booklet is a new edition of "The Art of Proportioning."

"Care and Handling of Sucker-Rods" is an illustrated booklet obtainable on request from S. M. Jones Co., McBirney Building, Tulsa. It presents the field practice followed by important producers. If its advice on running, pulling, loading, hauling and servicing is followed, longer life for sucker-rods will result.

A 40-page catalog covering modern lightning equipment for gasoline service stations has been released by Goodrich Electric Co., 2,900 North Oakley Avenue, Chicago. This catalog covers all types of reflectors for floodlighting, illuminating pump islands, signs, lift-tracks, interiors, etc.

Nickel-alloy steels in petroleum production equipment are the subject of a 12-page booklet announced by International Nickel Co., Inc., 67 Wall Street, New York.

Besides other articles of interest to oil men, the current issue of the Water Tower, published by Chicago Bridge and Iron Co., Chicago, Ill., contains one discussing the new Wiggins balloon roof for storage tanks.

Victaulic Co. of America, 26 Broadway, New York, has published a new catalog (No. 37-2) on Victaulic pipe-couplings and fittings as used with steel, wrought-iron and cast-iron pipe. The catalog contains engineering data and illustrations of field installations.

The Harnischfeger Corp., 4400 West National Avenue, Milwaukee, Wis., has issued a bulletin called "P&H Hoists." Profusely illustrated, the bulletin describes the added advantage in handling "off-the-floor."

Electrical conductors for power and lighting circuits in buildings of all types are discussed in a 48-page booklet which General Cable Corp., 420 Lexington Avenue, New York, sends on request. Helpful engineering information is given.

G. M. Pembroke's Sales District for Tube Turns Is Enlarged

Gilbert M. Pembroke, district manager for Tube Turns, Inc., of Louisville, Ky., now has the Mid-Continent and Gulf Coast areas in addition

GILBERT M. PEMBROKE

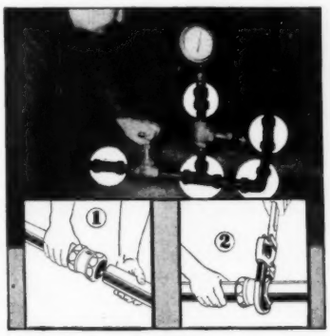
to his former territory and is in charge of sales west of the Mississippi River. Mr. Pembroke is at present in the Mid-Continent area, to spend three months contacting the industry and his company's distributors.

Transite Pressure Pipe Approved

The National Board of Fire Underwriters has issued a report of approval on Johns-Manville Corp.'s "Transite class 150 pressure pipe and couplings in sizes from 4 to 20 inches, inclusive, for use in underground water service where the working pressure does not exceed 150 pounds per square inch."

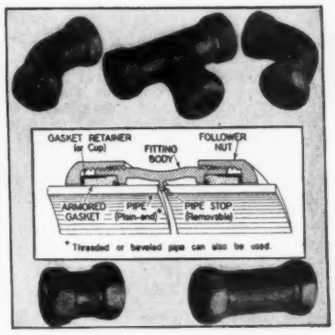
NOTHING BUT WRENCH IS NEEDED FOR DRESSER FITTING

Nothing but an ordinary wrench is required to complete a pipe joint with the standard line of Dresser style 65 fittings announced by the S. R. Dresser Manufacturing Co., 660 Fisher Avenue, Bradford, Pa. Time out for cutting pipe to exact lengths, threading, grooving, flaring or screwing up joints in cramped quarters is unnecessary, and the job is done in a few minutes.



After inserting the plain-end pipe into the fitting, which comes completely assembled, it is only needful to tighten two threaded octagonal follower nuts with a few quick turns of the wrench. As this is done, resilient "armored" gaskets at each end of the fitting are compressed tightly around the pipe, forming a positive seal. The resulting joint, Dresser engineers point out, is not only permanently tight but absorbs normal vibration, expansion and contraction movement, and permits deflections of the pipe in the joint. If the pipe is already threaded, it can also be joined in the same way.

The complete line of style 65 fittings includes standard and extra-long couplings, ells (both 45° and 90°) and tees, all supplied in standard steel-



pipe sizes from one-half to 2 inches inside diameter, black or galvanized. The fittings are recommended by the manufacturer for simplifying joint-making and repair work on both inside and outside piping for oil, gas, water, air, or other industrial lines. The basic principle is essentially the same as that used in other styles of the well-known Dresser coupling. The accompanying illustrations show the working principle of the style 65 fittings and the simplicity of installation.

March

22-24—Louisville, Ky., Kentucky Petroleum Marketers Association, Brown Hotel.

23—New York, Oil Trades Association of New York.

April

1-2—Dallas, Tex., American Petroleum Institute, Southwestern District, Division of Production, Baker Hotel.

7-8—Boston, Mass., Oil Men's Association of New England, thirteenth annual convention, Copley Plaza Hotel.

7-9—Birmingham, Ala., American Institute of Mining and Metallurgical Engineers, Open Hearth Conference.

8-10—Shreveport, La., Petroleum Industry Electrical Association.

13—Los Angeles, Calif., American Petroleum Institute, Division of Production, Pacific Coast district, Biltmore Hotel.

15-16—Cleveland, Ohio, 34th semiannual meeting National Petroleum Association, Cleveland Hotel.

Oil Man's Calendar

26-28—Hot Springs, Ark., Western Petroleum Refiners Association, annual meeting, Arlington Hotel.

May

4-9—White Sulphur Springs, W. Va., Society of Automotive Engineers, summer meeting, Greenbrier Hotel.

6-7—Columbus, Ohio, American Petroleum Institute, Division of Production, Eastern district, Deshler-Wallick Hotel.

10—Kansas City, Mo., Spring meeting Natural Gas Department, American Gas Association.

19-21—Tulsa, Natural Gasoline Association of America, annual meeting, Hotel Tulsa.

23-27—Pittsburgh, Pa., National Association of Purchasing Agents (Oil Company Buyers' Group) annual convention, William Penn Hotel.

June

1-3—Colorado Springs, Colo., American Petroleum Institute, mid-year meeting, Broadmoor Hotel.

7—Kansas City, Mo., Oil Field, Gas Well-Refinery Workers of America.

10-12—Pennsylvania Grade Crude Oil Association, annual meeting, on Great Lakes S.S. "Seeandbee," sailing from Buffalo, N. Y.

11—Santa Fe, N. M., Interstate Oil Compact Commission meeting.

14-19—Paris, France, Second World Petroleum Congress, during International Exposition.

25-26—Dallas, Tex. National Oil Scouts Association, annual meeting, Baker Hotel.

September

(?)—San Francisco, Calif., North American Gasoline Tax Conference.

27—Cleveland, Ohio, American Gas Association, nineteenth annual convention.

October

11-16—Houston, Tex., Oil-World Exposition.

November

9-12—Chicago, American Petroleum Institute, eighteenth annual meeting, Stevens Hotel.

CLASSIFIED ADVERTISING

Patent Attorneys

JACK A. SCHLEY
PATENT LAWYER

Patents Obtained—infringement practice in all Courts—oil field experience. 1807-11 Tower Petroleum Bldg., Dallas. 2014 Second Nat'l. Bank Bldg., Houston. 707 Insurance Building, San Antonio. 433 Munsey Building, Washington, D. C. Address any of these offices.

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to any one, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

For Sale—Maps

SOUTHWESTERN UNITED STATES
Includes all of following states: Texas, Louisiana, Mississippi, Arkansas, Oklahoma, Kansas, also Eastern New Mexico. Shows all oilfields by name and location. Alphabetically arranged list on margin of all discoveries these States during 1936. Lithographed. Size 3 x 4 ft. $1. Same map with pipe lines to date, white print with blue lines $7.50. Send for illustrated catalog describing over 400 ownership and field maps in Texas and Louisiana.
ZINGERY MAP COMPANY
Houston, Texas

SUCCESSFUL OIL OPERATORS
Are Using
ZINGERY OIL MAPS
Our Up-To-Date Lease and Fee Ownership Maps of Counties and Combination Development Maps Save Time and Money.
WRITE FOR DESCRIPTIVE FOLDER
1937 Revised Edition Map of State of Texas, eastern N. M., parts of southern Okla., SW Ark. and La. shows Oil and Gas Fields in color, Counties and County seat and elevations, co-ordinated alphabetical index of fields and counties.
Price $1.00 postpaid
ZINGERY OIL MAP COMPANY
Fair Building Fort Worth, Tex.

Ranches and Farm Lands

HOUSTON, TEXAS, 1280 acres choice land $35.00 an acre. Suitable suburban subdivision; investment; ranch; farming. Faces hard road. Only 10 miles city limits. Settling estate. Requires half cash but is wonderful bargain. Chas. S. Woods, 712 Republic Building, Houston, Texas. 30 years experience Texas. Highest references. Correspondence invited.

70 A. in fee, Sec. 29-18N-23E, Adair Co., Okla., with all oil, gas and mineral rights, perfect abstract title. $2.50 A. J. L. HANER, Muskogee, Oklahoma.

Royalties—Production

PRODUCING OIL ROYALTIES
for dealers
H. P. BOWEN
842 Kennedy Bldg., Tulsa, Okla.

Will Sell Acres or Royalties within Major lease boundaries, Texas Gulf Coast. Other lands with potential oil values. F. J. Winter, 379 Clarkson, Denver, Colorado.

For Sale—Maps

LITTLE OIL MAPS accurately picture the "hot spot" and important "wild cat" areas of Oklahoma. Used by Oil Companies, Brokers, Equipment Manufacturers, etc. Samples and complete details on request. ACME SERVICE, Inc., Publishers, 207 No. Robinson, Oklahoma City, Oklahoma.

Sectionized map, West Tex., New Mex., forty counties. 46x50. Shows development. $5. Oil City Map Co., Fort Worth, Tex.

Up to the minute lease and fee ownership maps West Texas counties. Field maps showing initial production and total depths of wells.
SOUTHWEST MAPPING COMPANY
Ft. Worth Nat'l. Bldg. Ft. Worth, Texas

Royalties—Production

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

F. A. SANSOME
Maintains a Complete Trading Organization for Brokers, Banks and Dealers
In
Oil Royalties
522 Fifth Avenue, New York, N. Y.

ROYALTY, Oil Property and Land Investors. If you have money that is not working, write me for my 1937 plans, you are part of them.
E. B. REEVES
Box 13, Alanreed, Gray Co., Texas.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

Petroleum Eng. Laboratories

GEOLOGIC STANDARDS COMPANY
1600 East 5th Place, Tulsa, Oklahoma.
Porosity-Permeability-Saturation Tests.

Royalties—Production

Brokers—Salesmen

Sell in the most active area in the United States — The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Securities and Exchange Commission. Inquiries invited.

B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

PRODUCING OIL ROYALTIES
15 years of experience
L. H. WITWER
214 Kennedy Bldg., Tulsa, Okla.

Oil Royalties and Oil and Gas Leases Bought and Sold
Want: Well located West Texas drilling block.
E. T. Marion
1109 Petroleum Building
Midland, Texas

PARTY, with experience, wishes to make connection with money, to buy royalties and minerals in producing areas or hot spots, Texas and Louisiana, for an interest. References furnished. Address Box H-693, The Oil and Gas Journal, Tulsa, Oklahoma.

Reliable dealers who buy and sell wildcat and semi-proven Royalties. Proven Royalties upon request. Kansas and Oklahoma. We buy direct from the Land Owner. Frank P. Bowen, Box 603, Tonkawa, Oklahoma. Telephone 440.

ROYALTIES PURCHASING TRUST, LTD., Moorgate Hall, Moorgate, London, E. C. 2., England, are buyers of producing oil royalties.

PRODUCING ROYALTIES WANTED
We are in the market for good producing royalties. Submit complete information and map of what you have to offer in first letter.
SOUTHLAND LEASE & ROYALTY CORPORATION
311 Milam Bldg., San Antonio, Texas.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood, P. O. Box 2261, Tulsa, Oklahoma.

CLASSIFIED DISPLAY RATES

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1 Inch	*13 times*	*4.50 per inch*	
1 Inch	*26 times*	*4.00 per inch*	
1 Inch	*52 times*	*3.50 per inch*	

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

CLASSIFIED

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgement is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.55*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
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6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

CLASSIFIED ADVERTISING

For Sale—Equipment For Sale—Equipment For Sale—Equipment For Sale—Equipment

SPECIAL PIPE OFFERING

40,000 ft.—6" std. line pipe with Victaulic couplings
1,600 ft.—15½" 70 lb. plain end casing
Large quantity gasoline and refinery plant equipment; all sizes pipe, valves & fittings.

BROWN-STRAUSS CORPORATION
Main Office—1446 Guinotte—Kansas City, Mo.
Branches:
Arkansas City, Kansas Sapulpa, Oklahoma Pyote, Texas

WANT TO BUY—STORAGE TANKS

From 5,000 barrel to 80,000 barrel inclusive. Wood roof tanks preferred.
Write your description and number of tanks you have to offer and where located. We will make you cash offer.

SONKEN-GALAMBA CORPORATION
64 North Second St. Kansas City, Kansas

FOR SALE

200 HP Fairbanks Morse TYPE "Y" OIL ENGINE 4 Cylinder, 10 years old, with stub shaft and clutch, price $4,400.00 loaded on car Great Bend, Kansas, for quick sale.

SONKEN-GALAMBA CORPORATION
64 N. 2nd St. Kansas City, Kans.

For Sale—Equipment

SEVERAL USED ROTARY RIGS
Spudders and Drilling Machines.
Several Steel Derricks & Rotary Equip.
J. S. Daniel, Beacon Bldg., Tulsa

WELDERS A.C. and D.C. electric motor and engine driven. Reconditioned. Service Co., 3732 Cedar Ave., Cleveland, Ohio.

FOR SALE: At low prices at our Seminole warehouse, large stock of used cable tools. No wire lines. I. T. I. O., Bartlesville, Oklahoma.

FOR SALE: Five service stations and storage plant, wholesale and retail on U. S. highways going through Pueblo. Further information write J. L. Kimble, 326 W. 8th St., Pueblo, Colorado.

FOR SALE: 3 Standard Rigs, 84' derrick, 6" irons with or without tools. Chicago delivery and inspection. William H. Cater, 2643 W. Monroe St., Chicago, Ill.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air compressor, Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio

FOR SALE: 200—4½" OD x 1" x 6" x 38" and 44" wing type used anchor clamps. I. T. I. O. Company, Bartlesville, Oklahoma.

Draw works — four speed — on steel unitized frame with heavy sprockets and chains ready to run. Will sacrifice for cash. James S. Smith Aldridge Hotel, Ada, Oklahoma.

THE PIERCE SELF-SEALING PIPE COUPLER
No Bolts Less Labor Long Life
WRITE FOR DESCRIPTIVE FOLDER
State Representative
Otto Williams
P. O. Box 2033 Shawnee, Okla.

2,000 FEET of 6" Rotary drill stem in twenty-two foot lengths, with good tool joints and threads. A-1 condition.
JAMES S. SMITH
Aldridge Hotel, Ada, Okla.

FOR SALE: Large new spudding machine, drilled one well, twenty inch top and 12 inch finish at 2,000 feet. Complete with all drilling and fishing tools, underreamers, 20", 16", 12" pipe, etc. 80 HP caterpillar engine with 8V belt drive. Located within eight miles of Denver, Colorado.
S. B. GEIGER & COMPANY
37 W. Van Buren St., Chicago, Illinois.

FOR SALE: Two 240 H.P., 180 R.P.M., 3 cylinder Busch-Sulzer Diesel engines in first-class condition with one 187 K.W. 240 V, A. C. belt driven generator and direct connected exciter. These engines are now connected together in tandem but could be separated to operate as single units. Will sell either or both units. Price $12.50 per H.P. F.O.B. our plant. STANDARD-TILTON MILLING COMPANY, Dallas, Texas.

Equipment Wanted

CASING 5⅓" or 6⅝" and 2" tubing and rods wanted. 8,000 feet. Cash. Must be bargain.
J. P. WILLIAMS
611 Central Nat'l. Bank, San Angelo, Tex.

Situations Wanted

GRADUATE CHEMIST, single, 21, 1 yr. experience in refinery laboratory, seeks better position in Mid-Continent Region or abroad. Excellent scholastic record. References. Address Box H-683, The Oil and Gas Journal, Tulsa, Okla.

Experienced sales engineer, oil field, gasoline plant and refinery experience, with successful sales record, desires connection with company wanting representation in Mid-Continent area. Address Box H-702, The Oil and Gas Journal, Tulsa, Okla.

Experienced surveyor: 16 years in oil fields; city, pipe lines, land lines. Address Box H-700, The Oil and Gas Journal, Tulsa, Oklahoma.

GRADUATE Mechanical Engineer, 36, familiar with oil field and Refinery Equipment, experience in U. S. A. and abroad, seeks connection with reliable company. Position in Latin America considered. Address Box H-663, The Oil and Gas Journal, Tulsa, Oklahoma.

Help Wanted

WANTED — Major oil company requires the services of three first class draftsmen for refinery drafting work. Must be experienced in pipe layouts. Also, two chemical engineers with some refinery experience. Give full details in all respects: age, education, previous experience and connections. Replies confidential. Permanent if satisfactory. Address Box H-701, The Oil and Gas Journal, Tulsa, Oklahoma.

The Advertising Dollar

should buy space that reaches the maximum number of readers with money to spend. In the oil industry only one medium does this—

THE OIL AND GAS JOURNAL

DON'T MISS AN ISSUE IN 1937

Business Opportunities

GEOLOGIST desires connection on percentage basis plus expenses. Highest credentials. Address Box G-823, The Oil and Gas Journal, 415 Lexington Avenue, New York City.

Leases—Production

ARKANSAS
Does not have any production (proration) restrictions. The opportunity for quick "payouts" is obvious. Investigate Royalty and leases opportunities here.
WILLIAM MONROE LAYTON
P. O. Box 411, Texarkana, Ark.
P. O. Box 949, Hot Springs, Ark.

NEW MEXICO, Chaves County, 1000 acre solid lease block. 9 years, 5c rentals, price 30c per acre. Roy G. Barton, Box 191, Clovis, New Mexico.

CAN FURNISH large drilling block, good merits, hot play in Lincoln and McPherson Counties, Nebraska. Address Box H-692, The Oil and Gas Journal, Tulsa, Oklahoma.

Specializing leases twenty acres up dollar acre, East Tex., La., S. Ark. Onwers—Attorney, Box 1122, Little Rock, Ark.

BLOCK of 10,000 acres open for drilling deal in Gove County, Kansas. F. G. WALTER, Florence, Kansas.

ILLINOIS BASIN OIL LEASES: 10 year leases; 10c rental blocks of forty acres to 15,000 acres. Write
BEN F. KAGAY
P. O. Box 177
Effingham, Illinois.

OPPORTUNITY IN COLOMBIA
Petroleum acreage on Magdalena River, eminently good geology, private lands, perfect title.
GONZALEZ MIRANDA AND COMPANY c/o J. D. I.
Box 224, Barranquilla, Colombia South America

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, New Mexico.

Incorporations

CHARTERS — Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington, Delaware.

Mailing Lists

MAILING LISTS
Of royalty investors, by deed, from pipe line company records, in every State, including Okla., Kan., Tex., La. and Ark. Also, lists of active retail royalty brokers and investing royalty companies. Lists made special. Please specify. 15 years experience.
OIL INDUSTRY MAILING LIST CO.
909 Tulsa Loan Bldg., Tulsa, Okla.

ROYALTY OWNERS
Names and addresses in any State. Royalty Lists, Box 105, Ft. Worth.

Leases—Production

LOCATING OIL ON A PER CENT
New fields located for a third of the oil. All expenses must be paid in advance. Loyal E. Scott, Consultant, Aurora, Mo.

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Next Week

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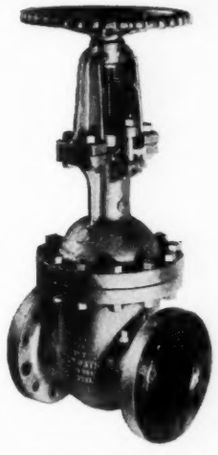

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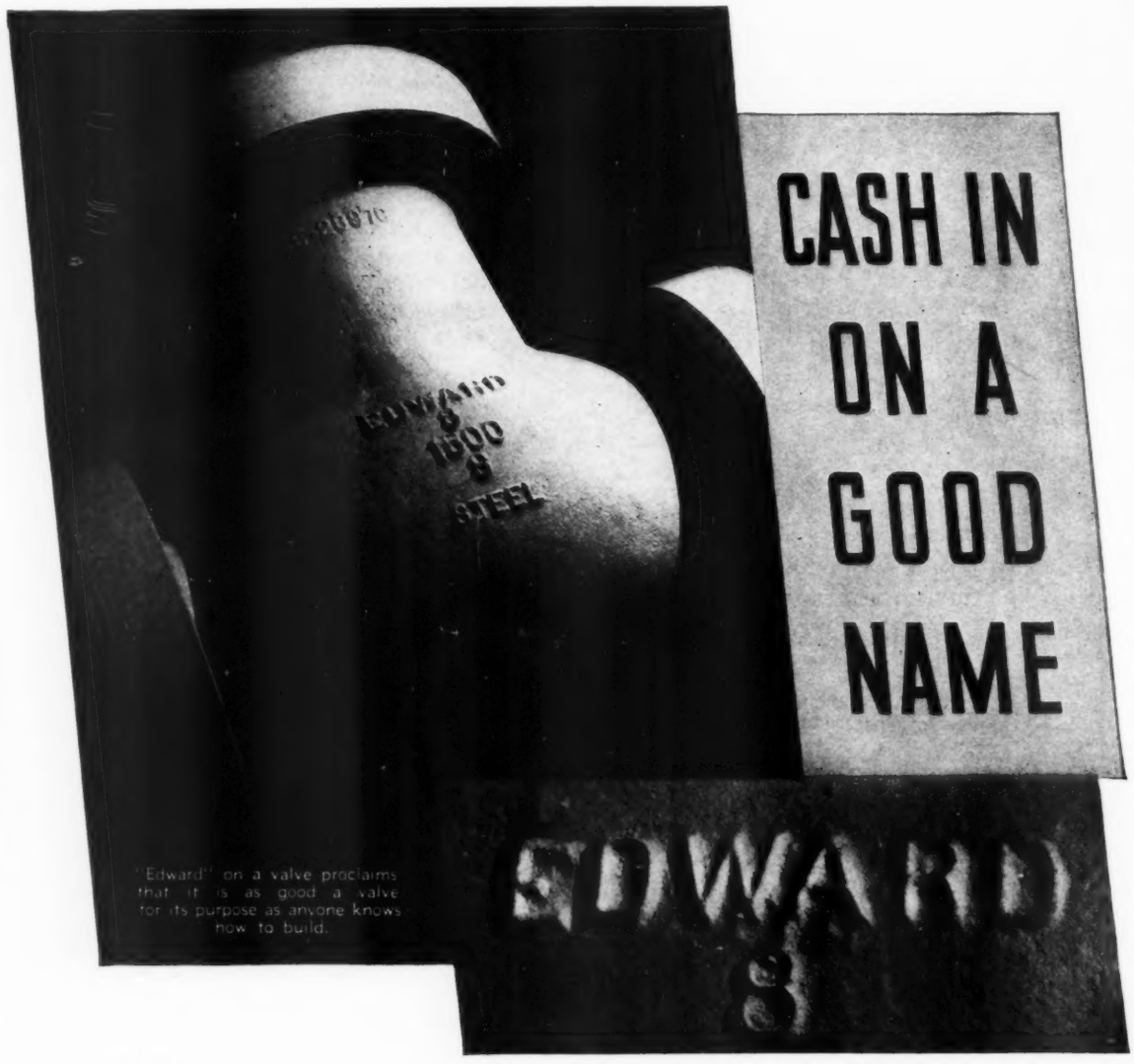
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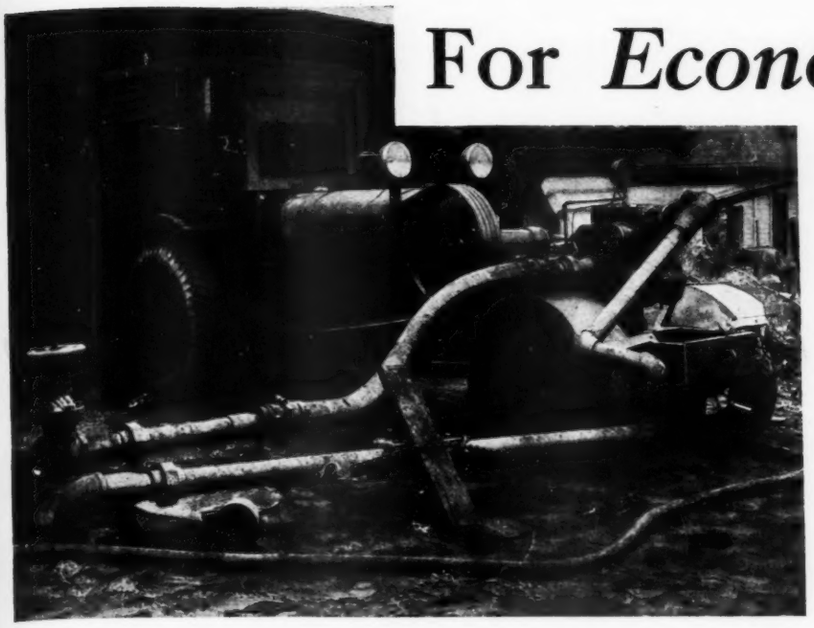

For *Economical Power,* Come to INTERNATIONAL

At Left: The Davon Pipe Line Co., has transformed this International I-30 Industrial Tractor into a traveling pump which makes the rounds of 10 wells every 6 days pumping oil from the wells into adjacent tanks. The tractor travels several miles over its route. When it arrives at a well the pump is quickly hooked-up and 1,350 gallons of oil are pumped into the tank in about 5 hours.

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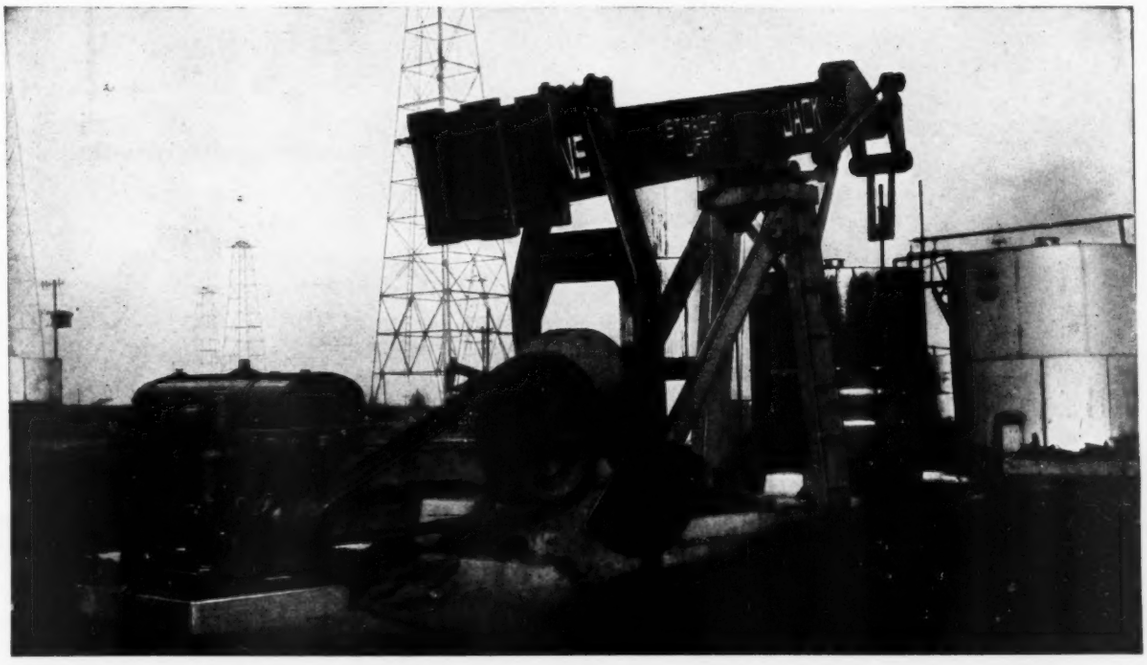
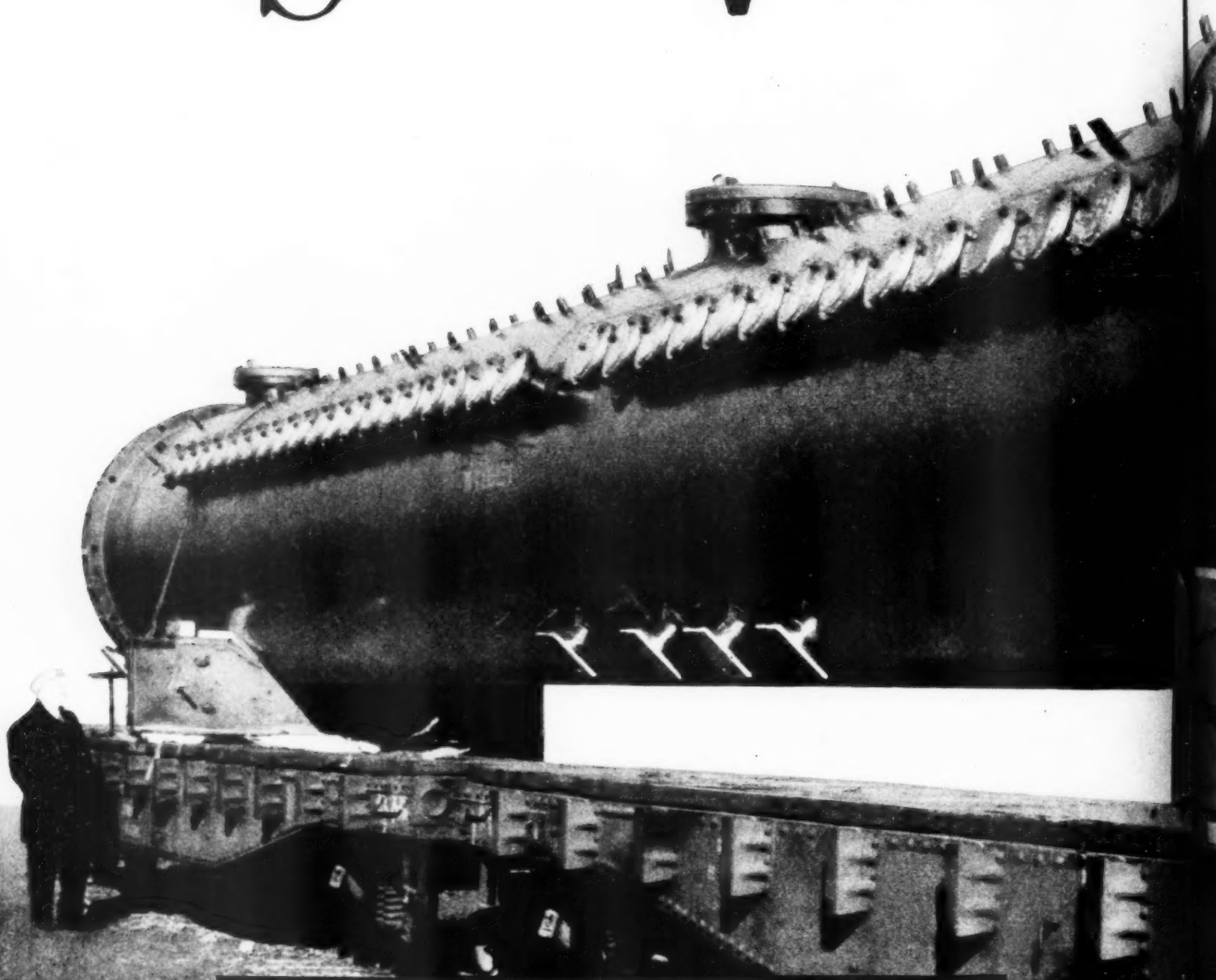


INTERNATIONAL HARVESTER

One of the Five Major Types of SMITH VESSELS



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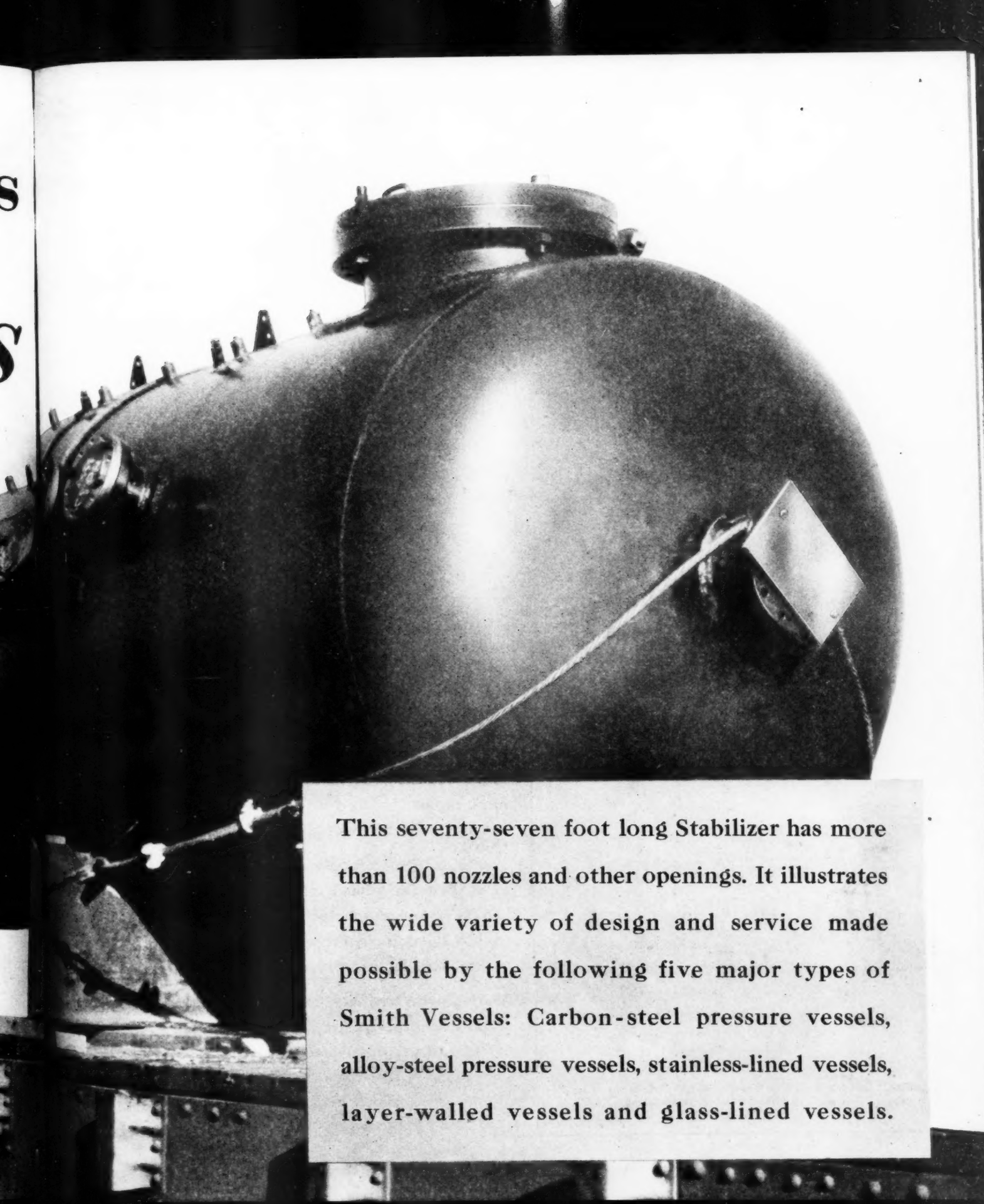

This seventy-seven foot long Stabilizer has more than 100 nozzles and other openings. It illustrates the wide variety of design and service made possible by the following five major types of Smith Vessels: Carbon-steel pressure vessels, alloy-steel pressure vessels, stainless-lined vessels, layer-walled vessels and glass-lined vessels.

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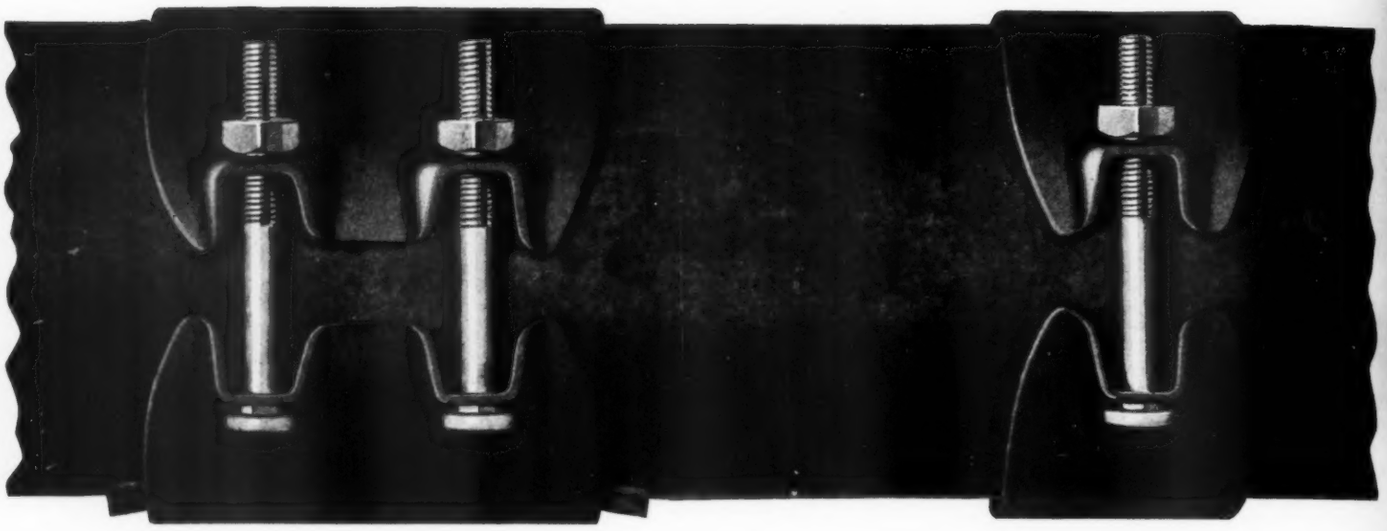

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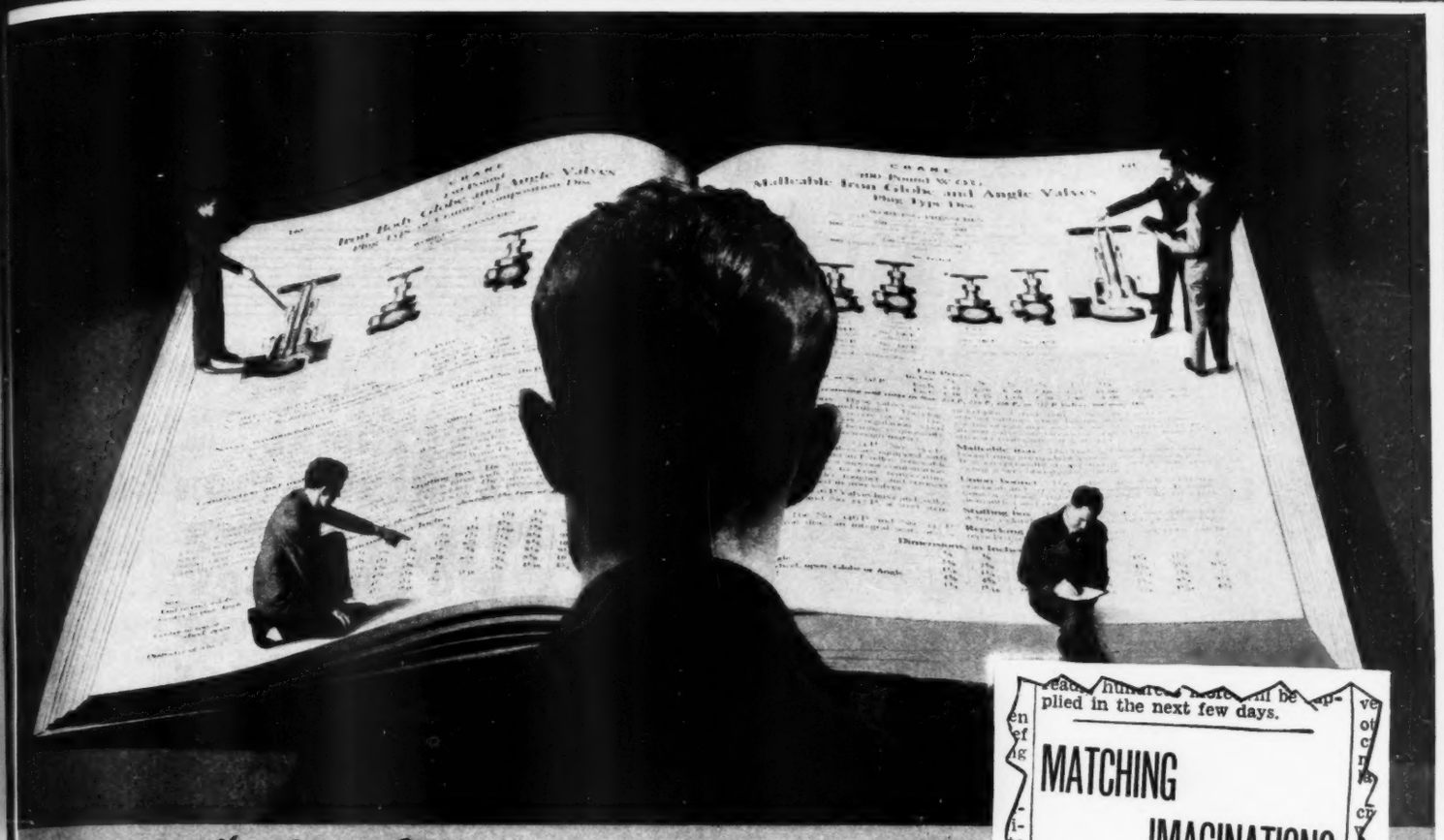
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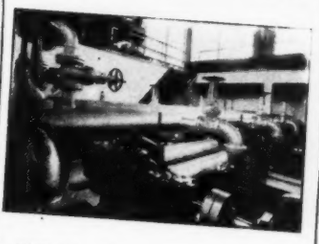

TULSA, OKLA., Feb. 15—Hollywood itself contains no more flaming imaginations than can be found among the engineers who play with the gigantic forces and fierce heats in the refineries of the nation.

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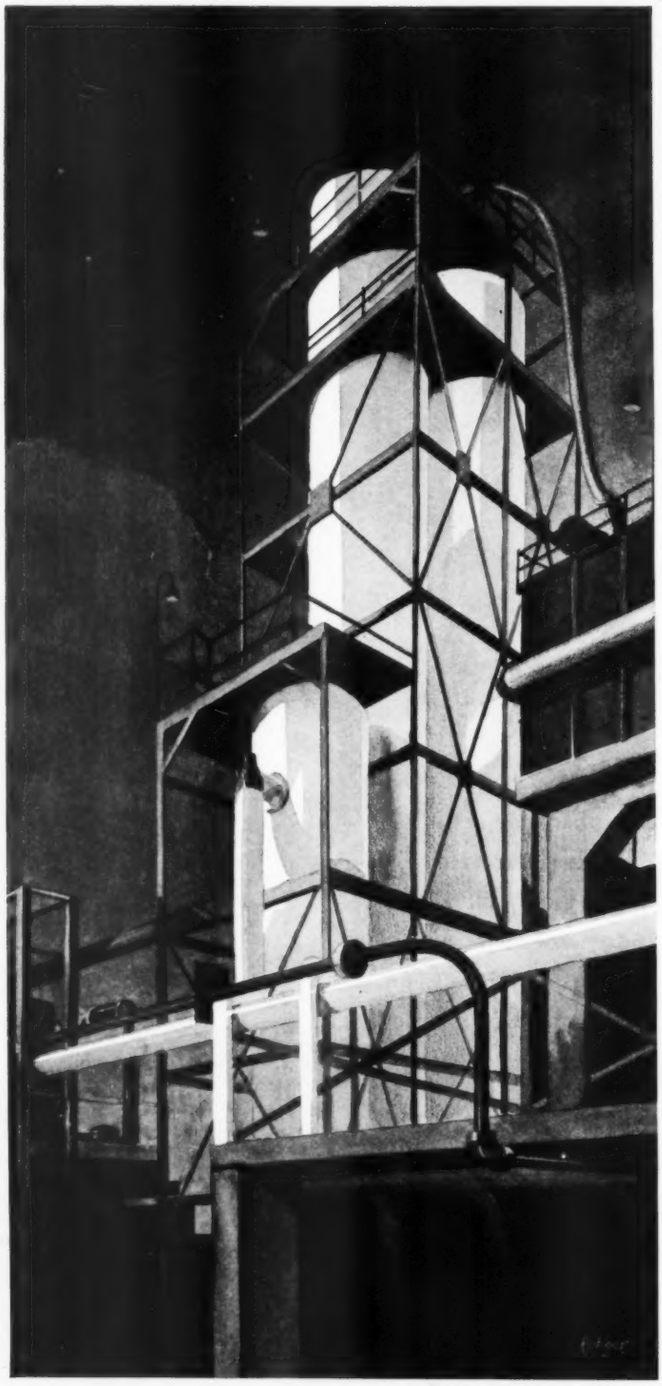

THERMAL POLYMERIZATION UNITS NOW OPERATING ARE PROVING THEIR ECONOMIC ADVANTAGES

Where by-product gases from cracking equipment or natural gas plants are available a Thermal Polymerization Unit may be adapted to individual plant conditions to convert saturated and unsaturated hydrocarbons into a superior blending gasoline.

In plants where Thermal Polymerization Units are operating the increased recovery of valuable motor fuels from by-products is reflected in the operating profits.

Refiners and natural gasoline operators are invited to investigate the possibilities of Thermal Polymerization through this organization or its agent, The M. W. Kellogg Company.

Licenses granted under United States and Foreign Patents by

THE POLYMERIZATION PROCESS CORPORATION
15 EXCHANGE PLACE
JERSEY CITY, N. J.

POLYMERIZATION

SCHLUMBERGER

Surveys

were used by Associated Division of Tide Water Associated Oil Company from the shoe of the first surface string at 850 feet to 10,537 feet in drilling its newly-completed 10,569 foot McGonigle No. 12 Well in the Ventura Avenue Field.

Congratulations to Associated Division of Tide Water Associated Oil Company on bringing in the

DEEPEST
PRODUCING WELL IN THE WORLD

Years of experience and highly developed equipment enable the Schlumberger organization to secure an accurate section of the formations in your well. Whether you are going after a record, drilling in wildcat territory or working in a familiar area, you can depend upon Schlumberger Electrical Logging to identify the formations you encounter and to define their electrical characteristics.

Schlumberger Well Surveying Corporation maintains conveniently located offices to give you quick service . . . any time . . . anywhere. Telephone or wire for a field party, day or night, to any of the following offices:

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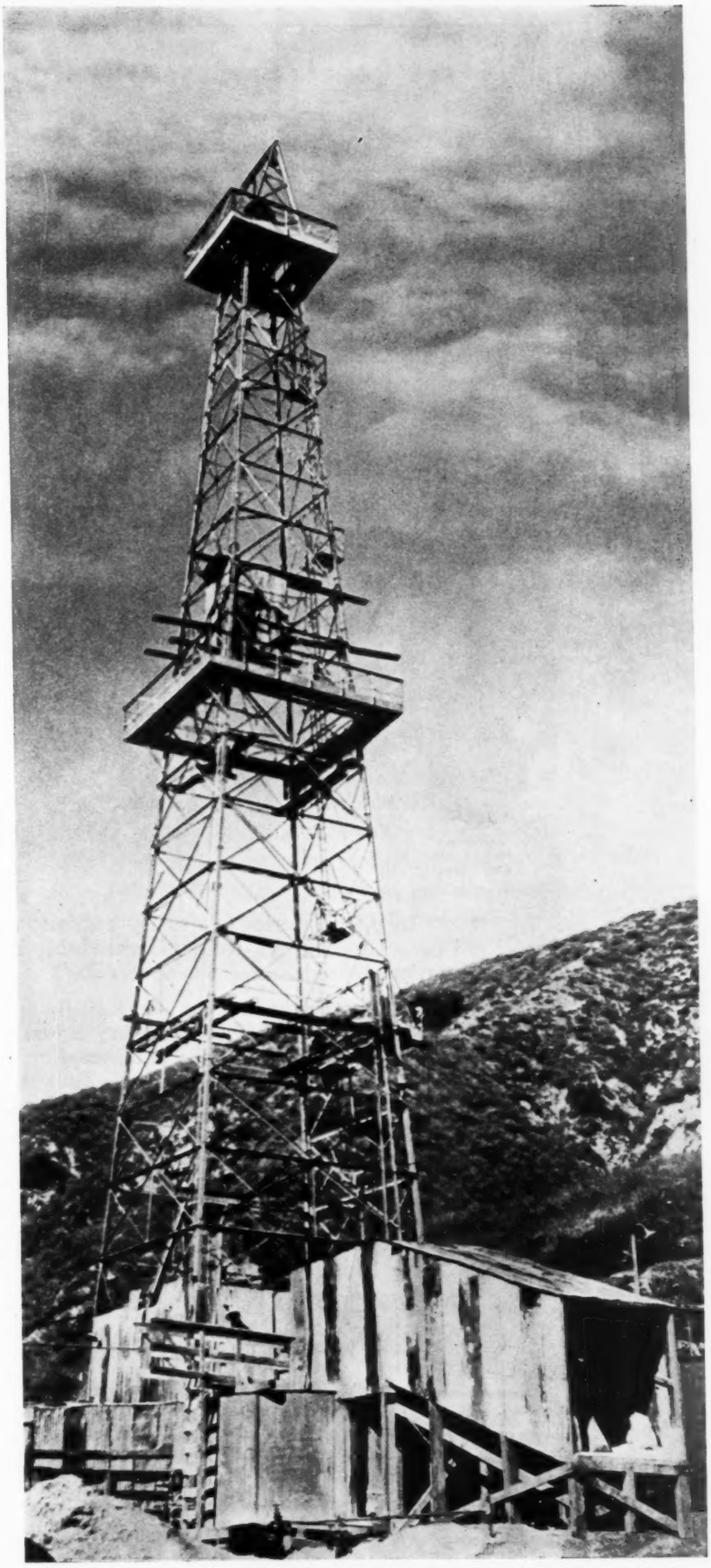
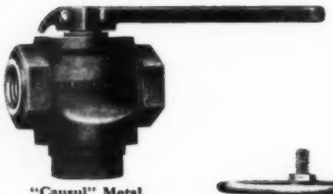
WELL SURVEYING CORPORATION
HOUSTON, TEXAS U.S.A.
"Electrical Well Logging"



Associated Division of Tide Water Associated Oil Company McGonigle No. 12, Ventura Avenue Field, California

Lunkenheimer Valves for Corrosive Service

"SA" Globe Valve



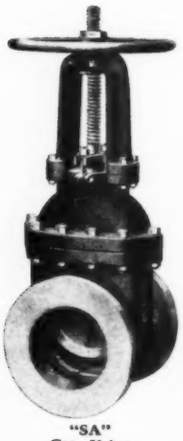
"Causul" Metal Indicator Cock

All-Iron "Ferrenewo" Check Valve

All-Iron "Ferrenewo" Globe Valve

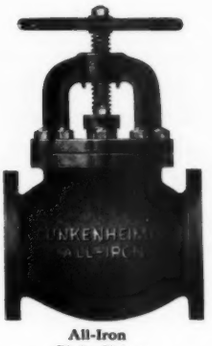
All-Iron "King-clip" Gate Valve

"Causul" Metal Gate Valve



"SA" Gate Valve

All-Iron Gate Valve



All-Iron Globe Valve

In oil refineries are many corrosion resistance problems for which Lunkenheimer All-Iron, "Causul" Metal and "SA" Valves are particularly adapted.

They have been used successfully and economically for such typical services as sludge acids, recovery acids, wash liquors, certain distillates, sour crudes, gases and gasoline, sulphuric acids and caustics.

The valves illustrated and many more are shown in the Guide to Better Service. The "Causul" circular lists numerous successful applications based on specific tests. This literature will prove a valuable aid in solving your corrosion resistance problems. We will gladly send copies on request.

THE LUNKENHEIMER CO.
"QUALITY"
CINCINNATI, OHIO, U. S. A.
NEW YORK CHICAGO BOSTON
PHILADELPHIA SAN FRANCISCO
EXPORT DEPT. 318-322 HUDSON ST., NEW YORK

BOILER MOUNTINGS — LUNKENHEIMER VALVES — LUBRICATING DEVICES

28-48A-91

KABLE KORD is a glutton for punishment. Gilmer, the oldest rubber belt specialists, builds this brute of a belt to lick your hardest flat-belt jobs. You can tell it's tough by the way it looks. The rugged "hide" lasts longer. Unique *patented* features make Kable Kord a power belt *plus* a contactor belt—you get two-belts-in-one. It hugs flat pulleys tighter, with a snugger, no-slip grip. It delivers maximum pull per square-inch. Get Kable Kord and save money.

Laboratory tests have proved that Kable Kord — endless or in rolls — lasts longer than many other flat belts costing twice as much. Actual factory competition proves that Kable Kord slices operating costs in half. Kable Kord Data Book FREE. Send for your copy today.

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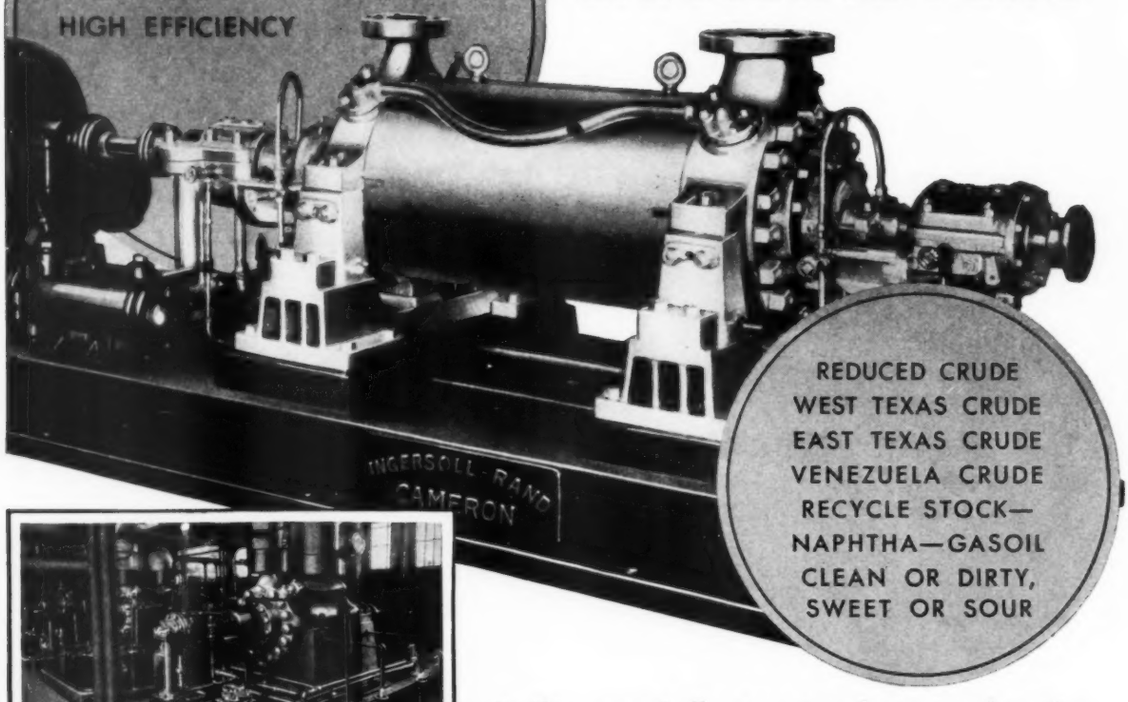
CAMERON HOT OIL CHARGING PUMP

TEMPERATURES TO 800°
PRESSURES TO 2,000 POUNDS
NON-PULSATING FLOW
HIGH EFFICIENCY



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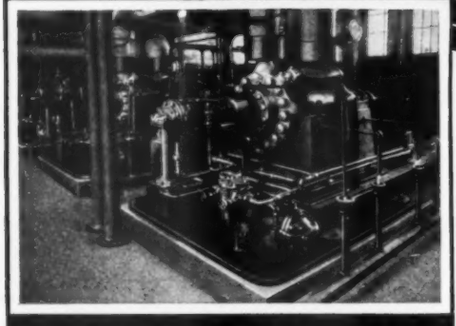


Three 5-stage Class AHT Hot Oil Charging Pumps in a Western refinery

This unit has given faithful service for nearly 50,000 hours. Three duplicate units have been in operation for almost the same period

Built especially to stand up under the severe punishment of handling hot oils in cracking-coil charging service.

The fact that there are many Cameron Hot-Oil Pumps which have long performance records without cost for dismantling or repairs is conclusive proof of their correct design.

Listed below are several highlights of the AHT design:

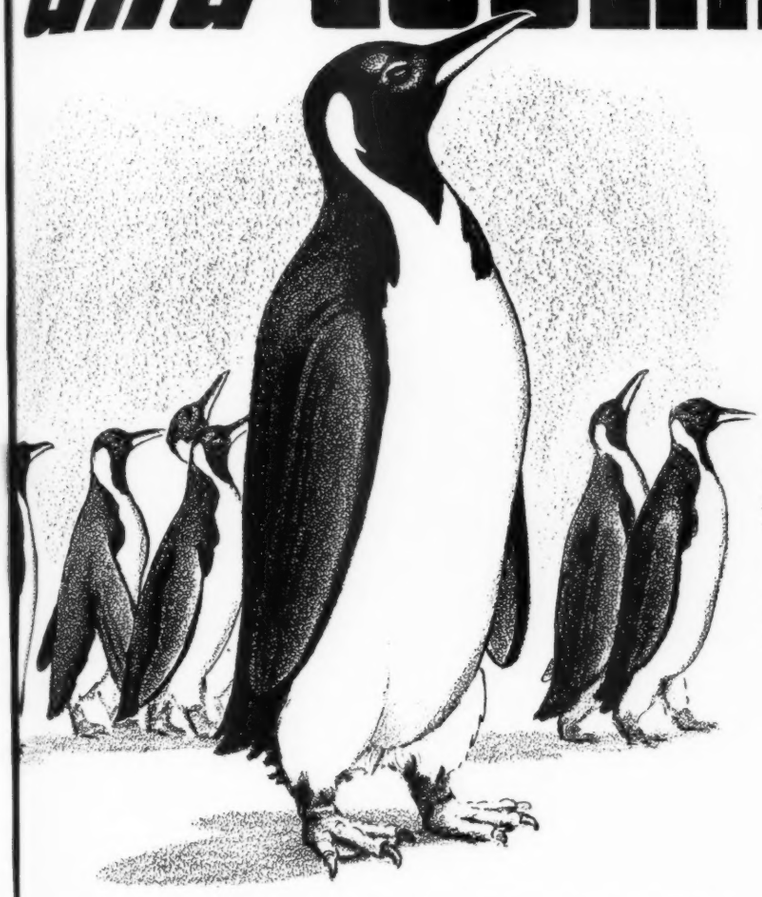
1. The AHT pump can be dismantled in the least time and with the least labor.
2. The balancing drum and sleeve can be inspected or renewed without breaking a high-pressure joint.
3. Every detail involved in field dismantling and assembly has been carefully and thoroughly studied to eliminate difficulties due to coking of parts during thousands of hours of service.

Full details are given in Bulletin No. 7065.

Ingersoll-Rand
CAMERON PUMP DIVISION
11 BROADWAY, NEW YORK CITY

421.10

PENGUINS, PARROTS, *and* COOLING TOWERS



It makes very little difference whether you're up near the Arctic Circle or down on the Equator.

To Fluor, an unusual situation affords an ideal location. To Fluor, a cooling problem becomes a cooling job.

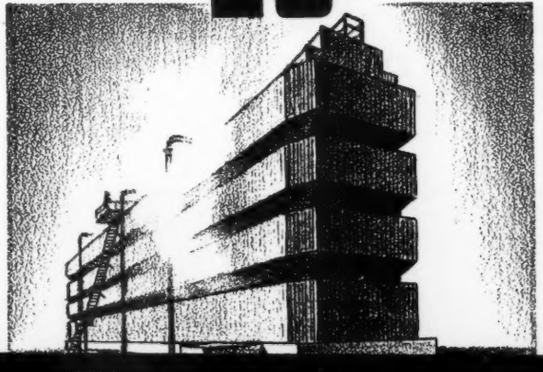
From Moose Jaw to Maracaibo, from Siberia to Siam, Fluor Aerator Type Cooling Towers cool water and save water. Placed within the Arctic's hoary hand, or within the Tropic's flaming maw, they yield the same continuous satisfaction, the same everlasting efficiency.

Fluor has designed its Aerator Type Cooling Tower to meet your conditions of place, altitude, temperature, wind velocity and volume. The unit pieces of each tower are accurately dimensioned; the assembled units are carefully crated and shipped; your engineer will have no difficulty supervising its erection.

Countless cases make it commonplace.

FLUOR AERATOR TYPE COOLING TOWERS

Structurally, Fluor Aerator Type Cooling Towers are sturdy. California Redwood, the structural material, is selected because of its characteristic strength, stability and long life. The exclusive Aerator design is such that no straight line passage of air or water through the tower is possible. Pressure loss through Aerator is negligible with wind velocities under six miles per hour. With increased wind velocities, pressure drop increases, but the velocity across the cooling surfaces does not increase proportionately. Results: water distribution is undisturbed, spray is not carried through the tower, and cooling performance is uniform. A Bulletin, T236, is complete in its description.



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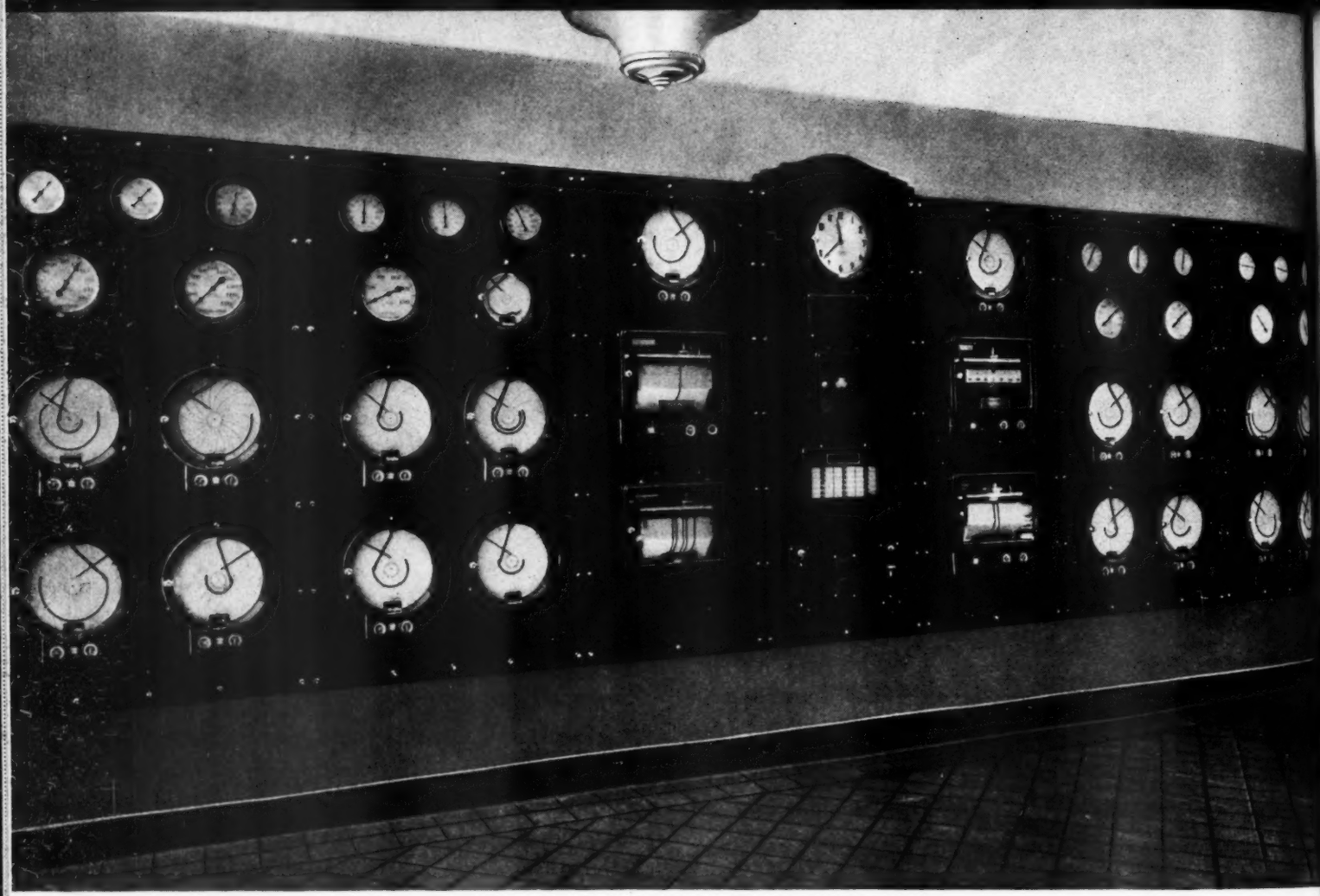
Southport Refinery "On Stream"

UNDER COMPLETE CONTROL



Write for Catalog 8901

The Brown Air-o-Line Centralized Control Board installed at the Southport Petroleum Co. for the control of the new Donnelly Cracking Unit—engineered by Mid-Continent Engineering Corporation, Consulting Engineers, Dallas, Texas —assures accurate measurement and positive control of temperatures, pressures, flows and liquid levels. The Brown Air-o-Line Controllers mounted on the above board include flow, pressure, liquid level and potentiometer controllers equipped with 1% to 150% Throttling Range and Automatic Reset.

BROWN AIR

holds new Cracking Unit 1500 hours

WITH BROWN Air-O-Line

"On Stream" 1500 Hours—means precision measurement and coordinated control of temperatures, pressures, flows and liquid levels in the operation of the new Donnelly Cracking Unit installed at the Southport Petroleum Co., Texas City, Texas.

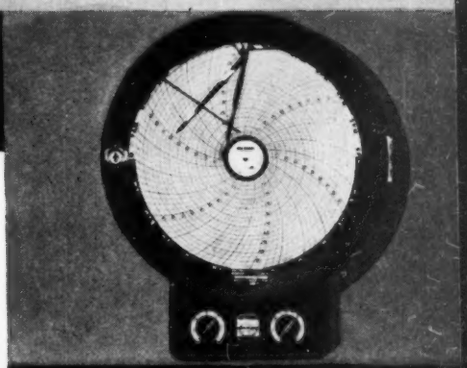
Some of the factors under complete control by Air-o-Line include: stabilizer reboilers, polymer units, tube banks, fractionating towers, case heads, gas accumulators, separators, stabilizer reflux, yield separators, topping units, etc.

The use of Graduated Dials for "Throttling Range and Automatic Reset" adjustments in the Brown Air-o-Line Controllers makes this precision and coordination possible. They provide an exact means of "tuning in" to specific process characteristics, without guesswork or interruption to automatic control.

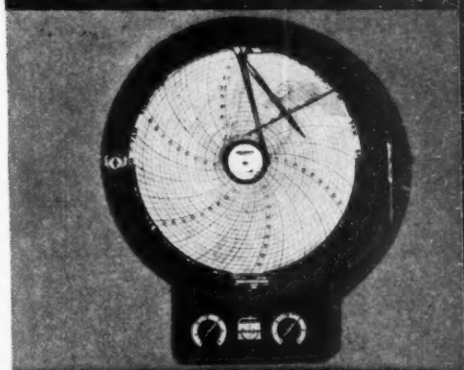
Brown Air-o-Line Controllers are set with the same simplicity as dialing a radio—once "tuned in", they become fully automatic. There is no need to dismantle the instruments to obtain the desired control results—a simple turn of a screw driver "tunes in" just the right amount of Throttling Range or rate of Reset and makes it possible to "tune in" "Throttling Range and Automatic Reset" while the controllers are operating.

Brown Air-o-Line Controllers not only confine refinery processes within limits, but "line out" control at the exact desired control point, regardless of rate or thruput changes. Designed for outstanding performance with simplicity, Brown Air-o-Line Controllers encourage operators to obtain the "best possible" —not "just good enough" control results.

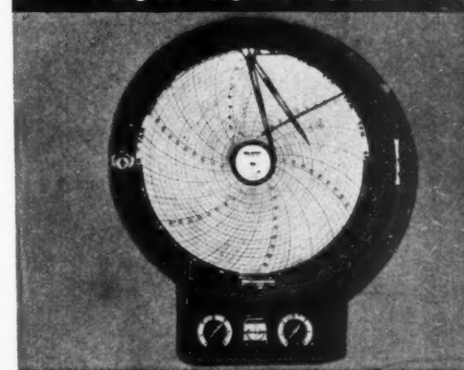
To maintain balanced operation—assure maximum yield at lowest cost—simplify your process control requirements with these modern Brown Air Operated Controllers. Catalog No. 8901 fully describes the outstanding features and the principles of operation of Brown Air-o-Line Controllers. Write for a copy. THE BROWN INSTRUMENT COMPANY, *a division of Minneapolis-Honeywell Regulator Co.*, 4488 Wayne Avenue, Philadelphia, Pa. Offices in all principal cities. Toronto, Canada: 117 Peter St.—Amsterdam-C, Holland: Wijdesteeg 4.—London, England: 70 St. Thomas' St., S.E.1.



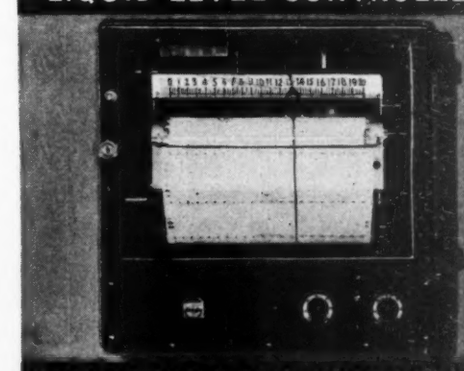
PRESSURE CONTROLLER



FLOW CONTROLLER



LIQUID LEVEL CONTROLLE



POTENTIOMETER CONTROLLE

OPERATED CONTROLLERS

OUTSTANDING PERFORMANCE WITH SIMPLICITY

NEW STANDARDS!

Far-sighted refiners are preparing for the higher standards of quality and production flexibility necessary to meet the constantly increasing demands upon cracking units.

Gasoline Products Company, Inc., licensor of modern cracking processes, through its comprehensive facilities enables refiners to anticipate these ever-changing economic conditions.

ENSES granted under United States and Foreign Patents for: Cross, de Florez, Holmes-Manley, Tube and Tank Cracking Processes, Uni-Coil Injection Process and Combination Cracking Units
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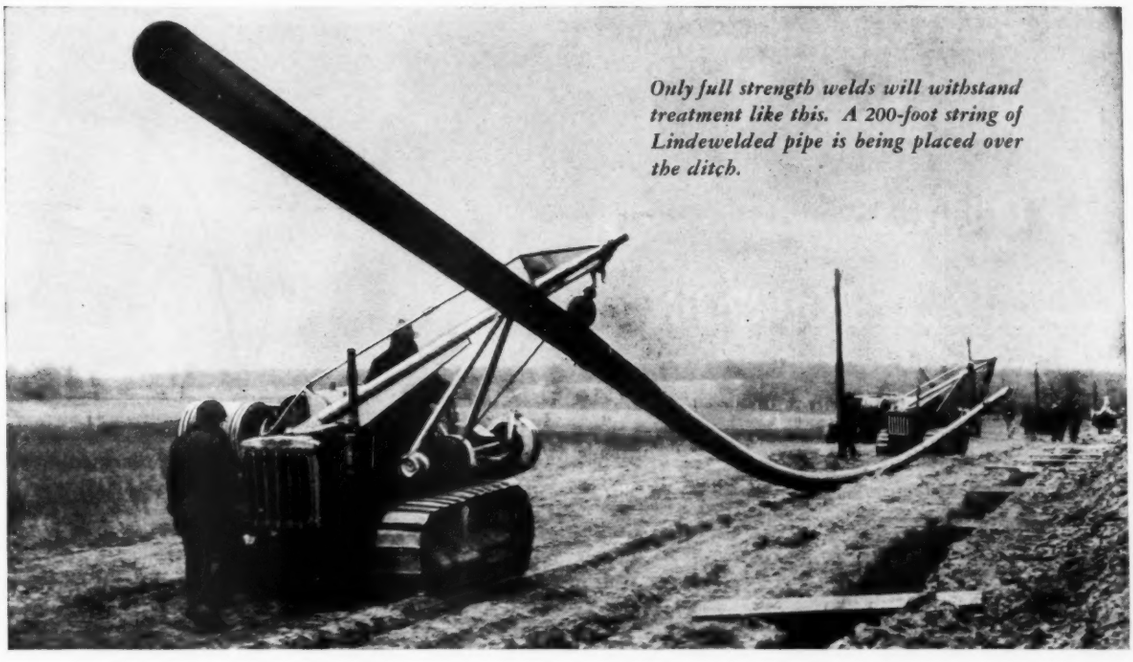
INJECTION UNI-COIL PROCESS

GASOLINE PRODUCTS

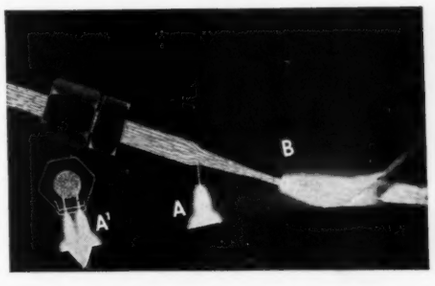
Strong, ductile pipe-line welds
made with Multi-Flame Lindewelding



Only full strength welds will withstand treatment like this. A 200-foot string of Lindewelded pipe is being placed over the ditch.

WITH Multi-Flame Lindewelding, you can produce welds that are as strong as the pipe itself, even when the pipe has a tensile strength up to 110,000 pounds per square inch. In this new technique of welding, the base metal is preheated before welding and postheated for slower cooling after welding. This exclusive feature of Multi-Flame Lindewelding makes the weld unusually ductile.

Multi-Flame Lindewelding is fast and economical, even under varied field conditions. A new booklet, "Lindewelding Pipe Lines," contains valuable information which can help you on your next pipe-line project. Write the Linde office near you for your copy. The Linde Air Products Company, Unit of Union Carbide and Carbon Corporation, New York and principal cities.



A schematic cross section shows the Multi-Flame Lindewelding Head in action. The small flames, A, preheat the pipe while the main flame, B, melts the welding rod and postheats the weld. A' is a cross section view through the preheating flames, A.

Everything for Oxy-Acetylene Welding and Cutting

LINDE OXYGEN • PREST-O-LITE ACETYLENE • OXWELD APPARATUS AND SUPPLIES FROM UCC LINDE UNION CARBIDE

REFINERS! BLENDERS!

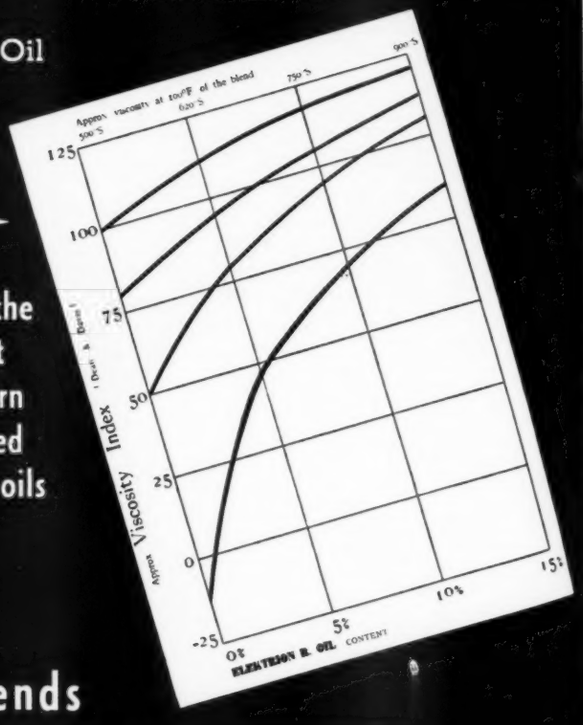
A Good Conventional Refined Mineral Oil + f.i. 10% **ELEKTRION R OIL**

= an **ELEKTRION BASE** Motor Oil

such blends display:

1. *Better* **VISCOSITY-INDEX**
2. *Better* **Non Sludging Properties**
3. *Better* **OILINESS**
4. *as low or lower* **POURPOINT**
5. *lower* **Cost Price to the Gallon**

than the best modern refined motor oils



MILLIONS of GALLONS of such blends
are confirming, all over the world, SUPERIORITY in PRACTICAL PERFORMANCE.

ELEKTRION R OIL

is an electrochemically made CONCENTRATED BLENDING STOCK, pale in color, of about 1000" S (200 centistokes) at 210° F.

AN ELEKTRION PLANT

Inventors and only makers are:

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DE CAVEL & ROEGIERS

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WHEN YOU CAN'T AFFORD PUMP "GRIEF" *SPECIFY* A GARDNER-DENVER CENTRIFUGAL AND BE **SAFE**

DEPENDABLE CONSTRUCTION

Double-wearing rings—tongue and groove fit in the casing, press fit and doweled to the impeller.

•

Alloy steel shaft—heat-treated and accurately ground and polished.

•

Extra deep stuffing boxes—split glands and swing bolts to facilitate packing.

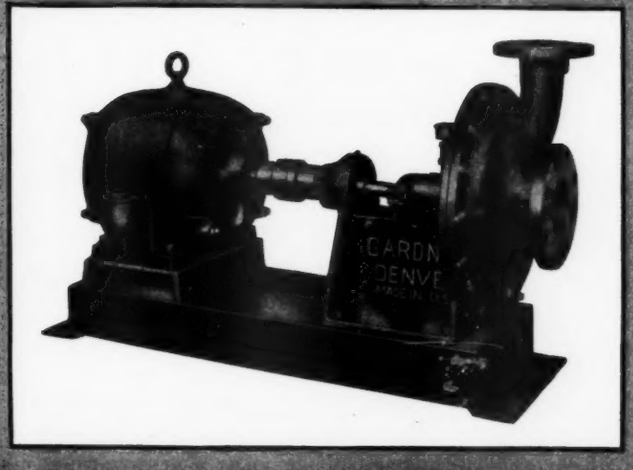
•

Cartridge type ball bearing housings—dust- and splash-proof bearings designed for high thrust and radial loads.

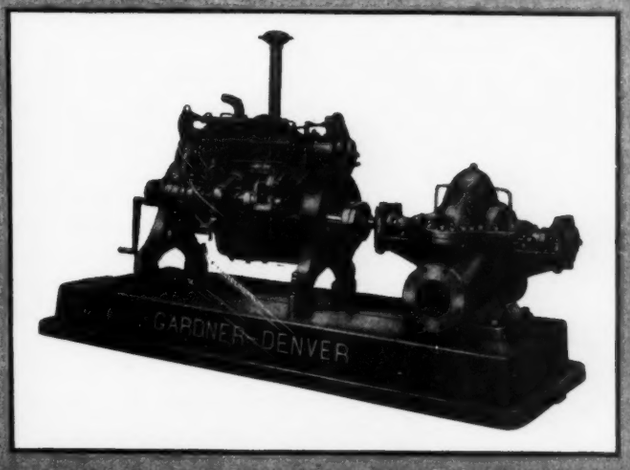
•

Special formula cast iron—high tensile strength (generally known as semi-steel) special alloys on request.

For water supply—refinery transfer—or for any of the hundred and one uses where pump service must not fail—use Gardner-Denver Centrifugal Pumps. Because they are designed for dependable, trouble-free operation, they give you the safety you need—plus high efficiency. Bulletin A-103 contains valuable information which every buyer of a centrifugal pump should have. Write for it.



Gardner-Denver Side-Suction Centrifugal Pump—direct connected to electric motor.



Gardner-Denver Horizontally Split-Case, Single-Stage Centrifugal Pump, direct connected to 75 h.p. gasoline engine.

Since 1859

GARDNER-DENVER COMPANY, Quincy, Illinois

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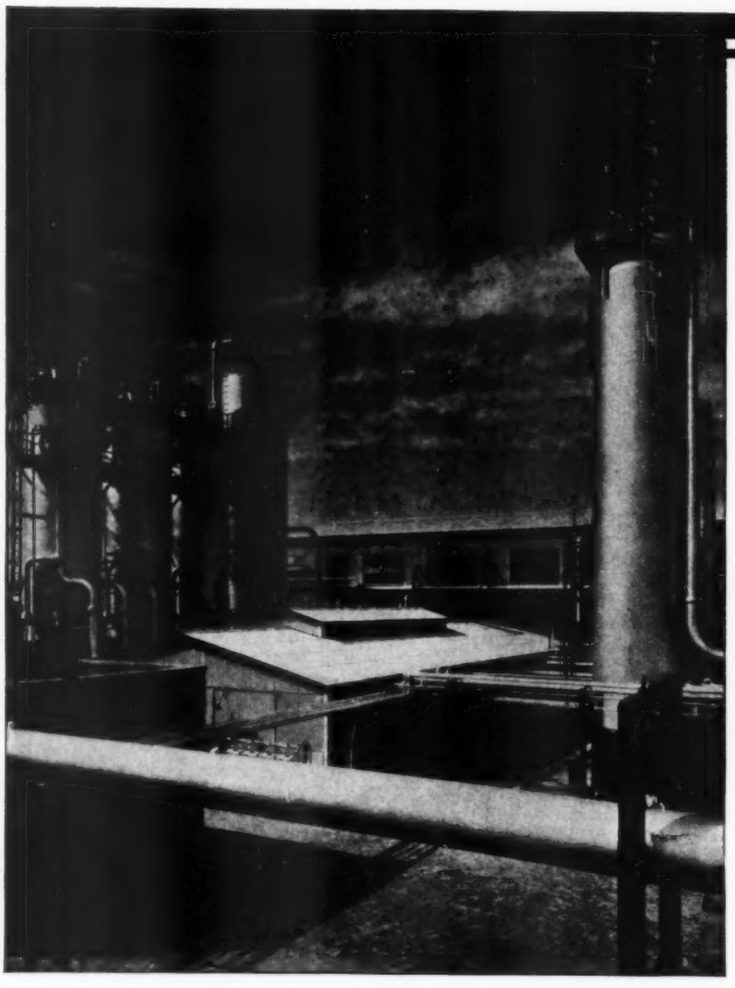

THE MANUFACTURE OF LUBRICATING OILS REQUIRES A HIGHLY SPECIALIZED KNOWLEDGE OF PROCESSES —EQUIPMENT— CONSTRUCTION AND OPERATING CONDITIONS

Kellogg-built lubricating oil process units have incorporated in their design the benefits of the latest advances in research development and engineering experience.

As licensing and construction agent for the JUIK processes, Kellogg offers refiners a choice of various combinations, as shown to the left.

Propane Dewaxing • Acid Treatment in Propane • Propane Deasphalting and Deresinating • Phenol Extraction (Single Solvent) • Phenol and Cresylic Acid Extraction in the presence of Propane

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LICENSING AND CONSTRUCTION AGENTS under United States and Foreign Patents for: Gasoline Products Company, Inc. - Cross - Holmes-Manley-de Florez Tube and Tank - Combination Cracking Units • • • The Polymerization Process Corporation - Gas Polymerization Units • • • The Gray Processes Corporation - Clay Treating • • • Standard Oil Company (New Jersey) - Standard Oil Company (Indiana) - Union Oil Company of California - Lube oil refining with Propane and Phenol • • • Deasphalting - Dewaxing - Solvent Extraction and Acid Treating Plants

Buy IRON valves . . .

as carefully as bronze

Specify "Jenkins"

A policy of using "the best" on large lines, too, has produced sizeable savings in repair and replacement expense for hundreds of valve users

FOR A steadily increasing number of installations Jenkins Iron Body Valves are being specified like Jenkins Bronze Valves. And these installations are producing savings that prove the wisdom of using "the best" for large lines, too.

The same characteristics which enable a "Jenkins" to give an extra-measure of trouble-free performance in the hard, continuous duty of bronze valves, will also lead to economy in iron body valve services. Trouble with iron body valves frequently means trouble, indeed. To haul a large valve off a line and make repairs takes a good deal of time and labor. Often it involves a lengthy shut-down and expensive new parts or costly replacement. Certainly under such conditions it pays to install a valve that will stay on the job with the minimum of attention.

That is the reason why so many valve users today are seeking "the best" Iron Valve they can get. Why they pick a "Jenkins" as best is made clear by our booklet—"PHOTO-FACTS." With interesting pictures and few words it presents the many superior features of Jenkins Iron Body Valves. Send for a copy. See what Jenkins offers . . . at the standard price of good valves.

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Photo-Facts . . .

answer the Question

"How are Jenkins **IRON** Valves better?"

Get this important Booklet NOW . . . .

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Lubrotite
GATE VALVES

● Here is a valve that remains tight regardless of service conditions. The seating surfaces are protected and even if the protection is penetrated, the effects of the damage are offset.

By a unique duct system, a *lubricant-seal* is applied between the seating surfaces of the Lubrotite Valve. This lubricant seal reduces friction and wear to a minimum and coats the seating surfaces with a corrosion resistant film. Though seating surfaces may become worn and scratched to an extent that would produce increasing leakage in ordinary valves, the lubricant seal fills in the damage and keeps the valve absolutely tight.

You find a definite relief from leaks, and therefore less necessity for servicing when you use Lubrotite Gate Valves—just as with other Reading-Pratt & Cady Valves.

READING-PRATT & CADY DIVISION
AMERICAN CHAIN & CABLE COMPANY, Inc.
BRIDGEPORT, CONNECTICUT
In Business for Your Safety

ACCO

READING-PRATT & CADY VALVES

A Successful Test Run . . .

and

AN ORDER FOR TWO DUPLICATE UNITS

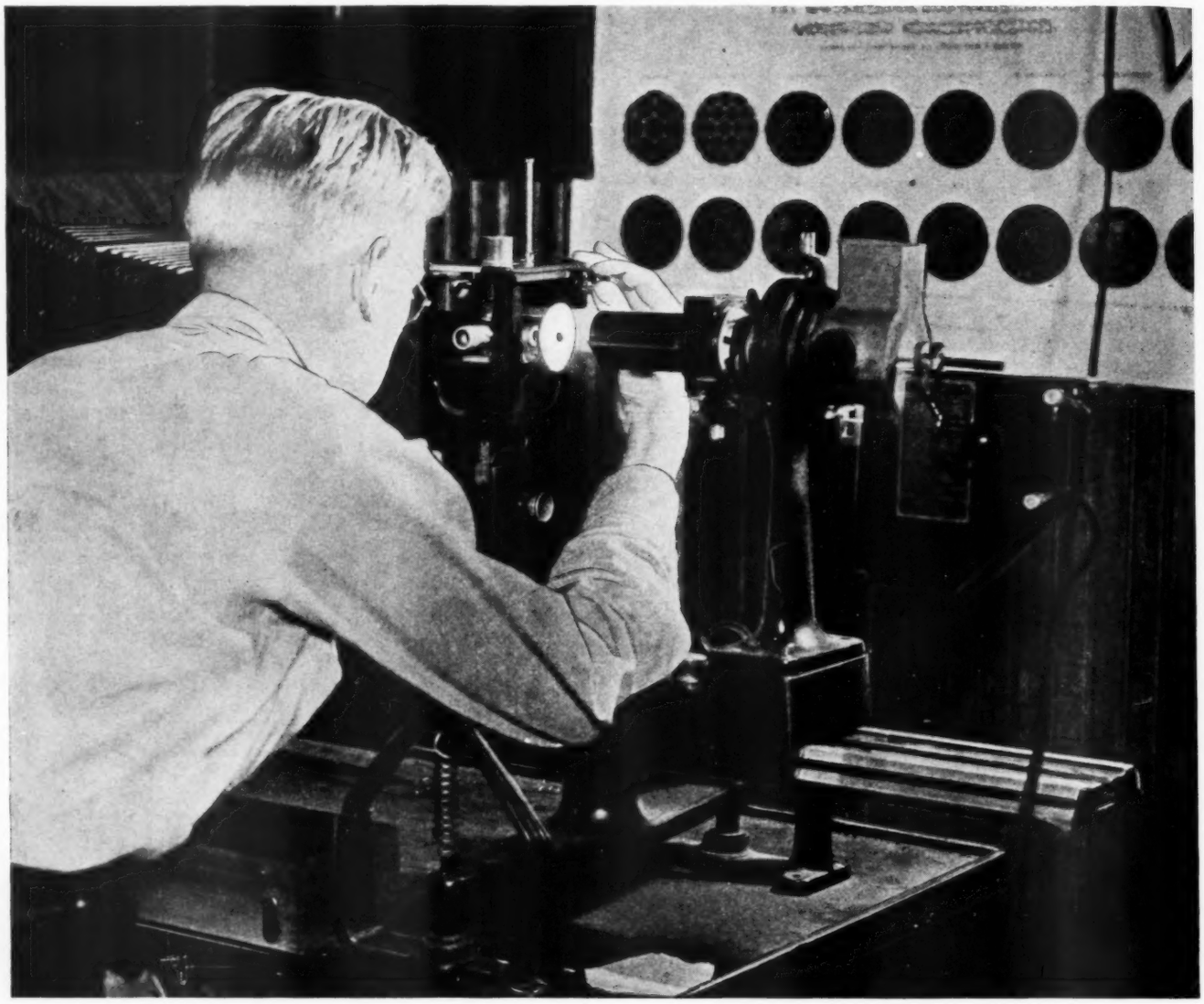
On a full month's run, on mid-continent and Michigan crudes, a recently completed Lummus Combination Selective Cracking Unit so fully met guarantees and expectations as to yield, octane and fuel oil specifications, that the oil company has ordered a second Lummus Combination Selective Cracking Unit for the same refinery, and a third unit for another location.

These charts of a typical day's run indicate the smoothness of performance.

THE LUMMUS COMPANY, 420 LEXINGTON AVENUE, NEW YORK, N. Y. • BUSH HOUSE, ALDWYCH, LONDON, W. C. 2

LUMMUS

PETROLEUM REFINING PLANTS



SPECIFICATIONS, PLUS

When is a pipe or tube "good enough?" The Pittsburgh Steel Co. believes it is only when the pipe or tube meets tests of strength and accuracy far *beyond* the requirements of the job for which it is destined. For that reason, the various tests to which Pittsburgh Seamless is subjected, such as hydrostatic pressure, tørsion, tensile strength, hardness and impact, are designed to measure a degree of perfection safely beyond standard specifications.

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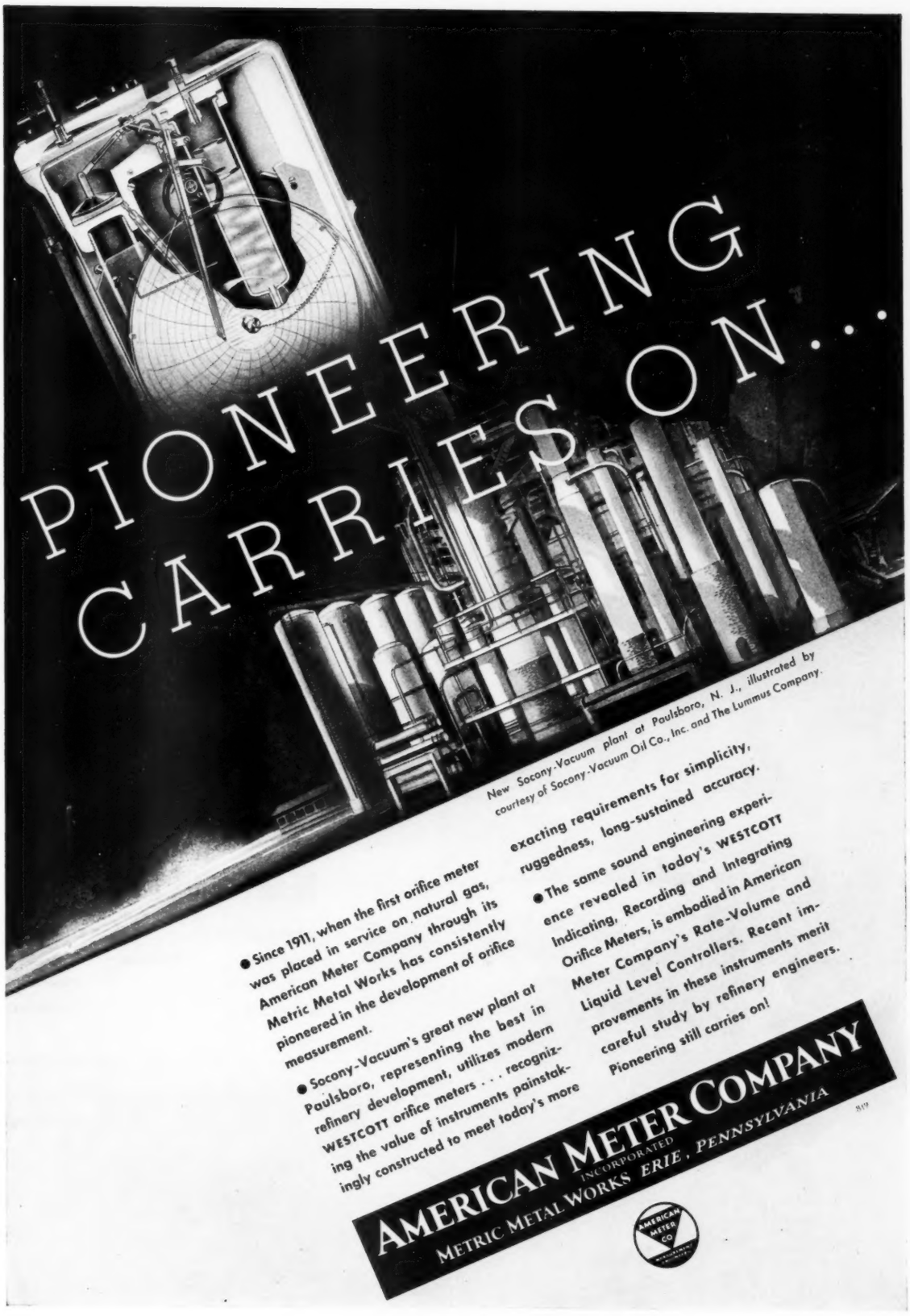
Pittsburgh Seamless

DRILL PIPE · CASING · LINE PIPE · OIL WELL TUBING

THERE IS NOTHING SUPERIOR TO SEAMLESS



New Socony-Vacuum plant at Paulsboro, N. J., illustrated by courtesy of Socony-Vacuum Oil Co., Inc. and The Lummus Company.

● Since 1911, when the first orifice meter was placed in service on natural gas, American Meter Company through its Metric Metal Works has consistently pioneered in the development of orifice measurement.

● Socony-Vacuum's great new plant at Paulsboro, representing the best in refinery development, utilizes modern WESTCOTT orifice meters . . . recognizing the value of instruments painstakingly constructed to meet today's more exacting requirements for simplicity, ruggedness, long-sustained accuracy.

● The same sound engineering experience revealed in today's WESTCOTT Indicating, Recording and Integrating Orifice Meters, is embodied in American Meter Company's Rate-Volume and Liquid Level Controllers. Recent improvements in these instruments merit careful study by refinery engineers. Pioneering still carries on!

AMERICAN METER COMPANY
INCORPORATED
METRIC METAL WORKS ERIE, PENNSYLVANIA

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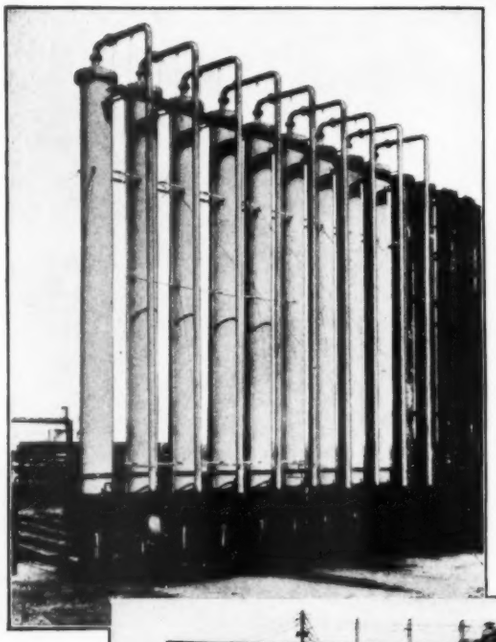
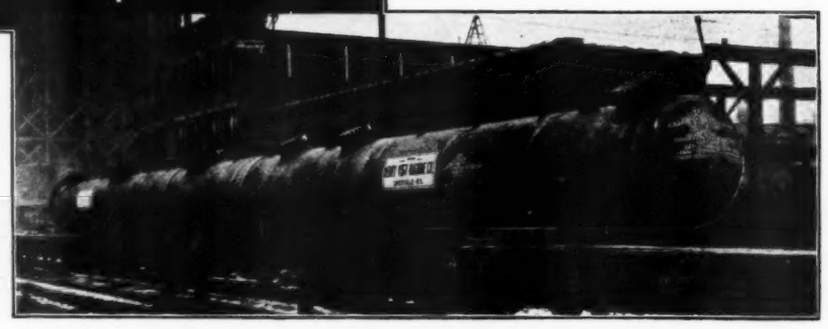
HOMOWELD vessels for modern refineries





Pressure Stills . . . Reaction Chambers
Absorption Towers . . . Heat Exchangers
Debutanizers . . . Expansion Chambers
Fractionating Towers . . . Bubble Towers
Reflux Towers . . . Soaking Drums
Accumulators . . . Condensers
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WIDE ACCEPTANCE!

A daily production of over 175,000 barrels of GRAY clay treated motor fuel is now provided for in units operating and under construction.

Investigate why the GRAY (CLAY TREATING) PROCESS has won such wide acceptance!

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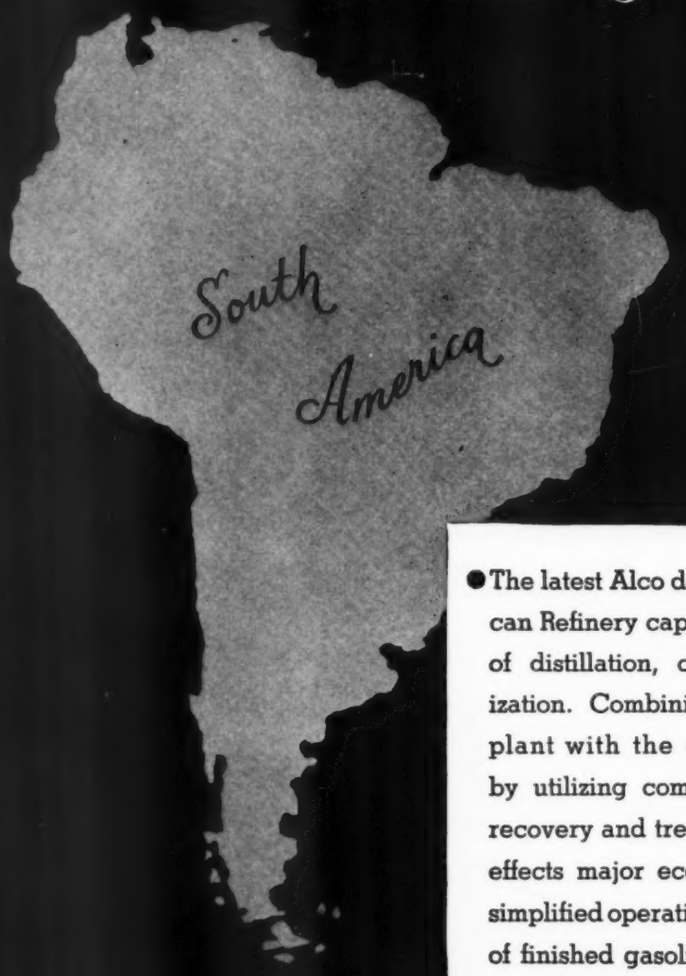
Alco in South America



● The latest Alco design for a South American Refinery capitalizes the combination of distillation, cracking and polymerization. Combining the polymerization plant with the cracking unit—thereby utilizing common fractionation, gas recovery and treating systems—not only effects major economies in design and simplified operation, but gives high yields of finished gasoline with low capital investment and operating cost.

ALCO PRODUCTS

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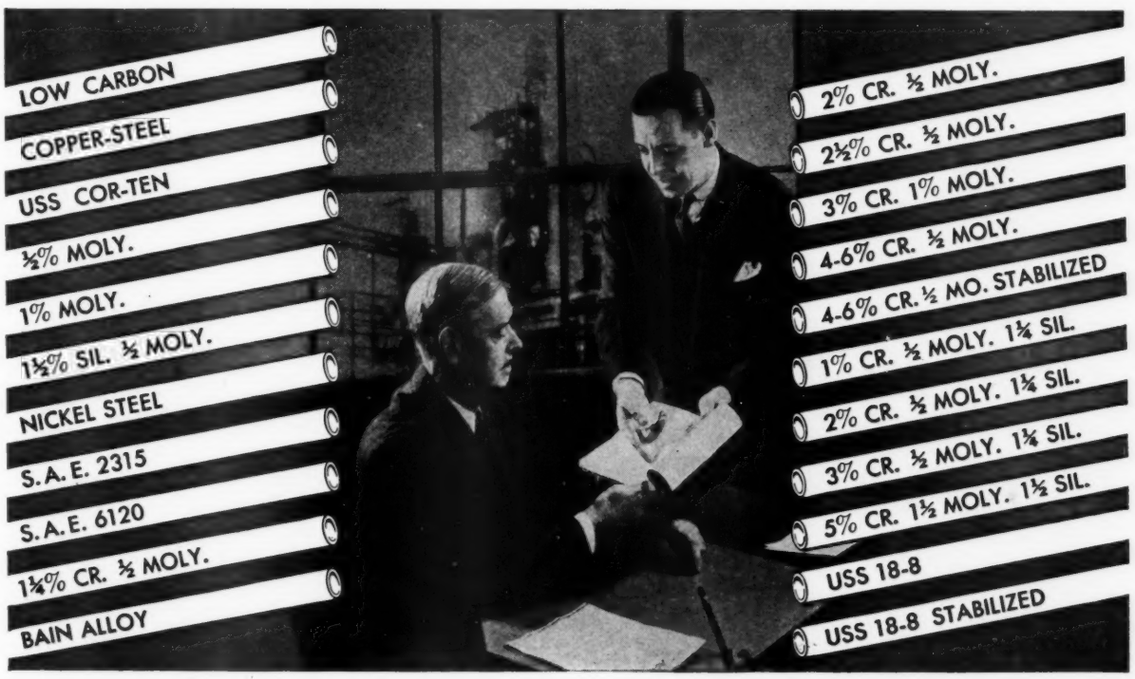

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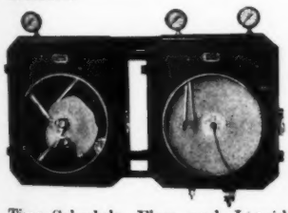

Time-Schedule Flow and Liquid Level Controller.

Send COUPON for this FREE Comprehensive Review of Taylor Developments

HERE in one place you will find the subject of rate-of-flow and liquid level measurement and control brought up to date.

Taylor Flow and Liquid Level instruments are the result of a well-rounded program of intensive research and development. In actual service, they have proved that the same confidence can be placed in them as in other Taylor products.

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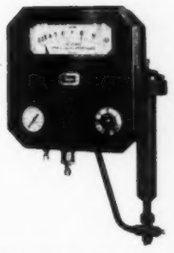
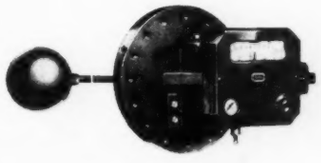
Ask a Taylor Representative for this service. But first of all get this new Catalog 70 J. The easiest and quickest way is to send the coupon



Indicating Flow and Liquid Level Controller.

Recording Flow and Liquid Level Controller.



Internal-float Liquid Level Controller.

External-float Liquid Level Controller.

Taylor INSTRUMENTS

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Rochester, N. Y. (Toronto, Canada—if you are in Canada)

Gentlemen:

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The historic McMann ferry that plied the Cimarron River, two and a half miles south of the present town of Oilton, Oklahoma. Across this ferry between 1912 and 1915, were transported tons of equipment used in the development of the famous Cushing and Oilton fields. . . . The old ferry was the only safe method of crossing due to the Cimarron's current and treacherous quicksand bottom.

Oklahomans, proud of their state's dominant position in American oil production, can well give a big vote of thanks to the discoverers and developers of Oilton and Cushing. . . . Credit where credit is due is always gratifying. The praise Dowell is constantly receiving on its development and application of *Inhibited* Acidizing is both appreciated and significant.

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